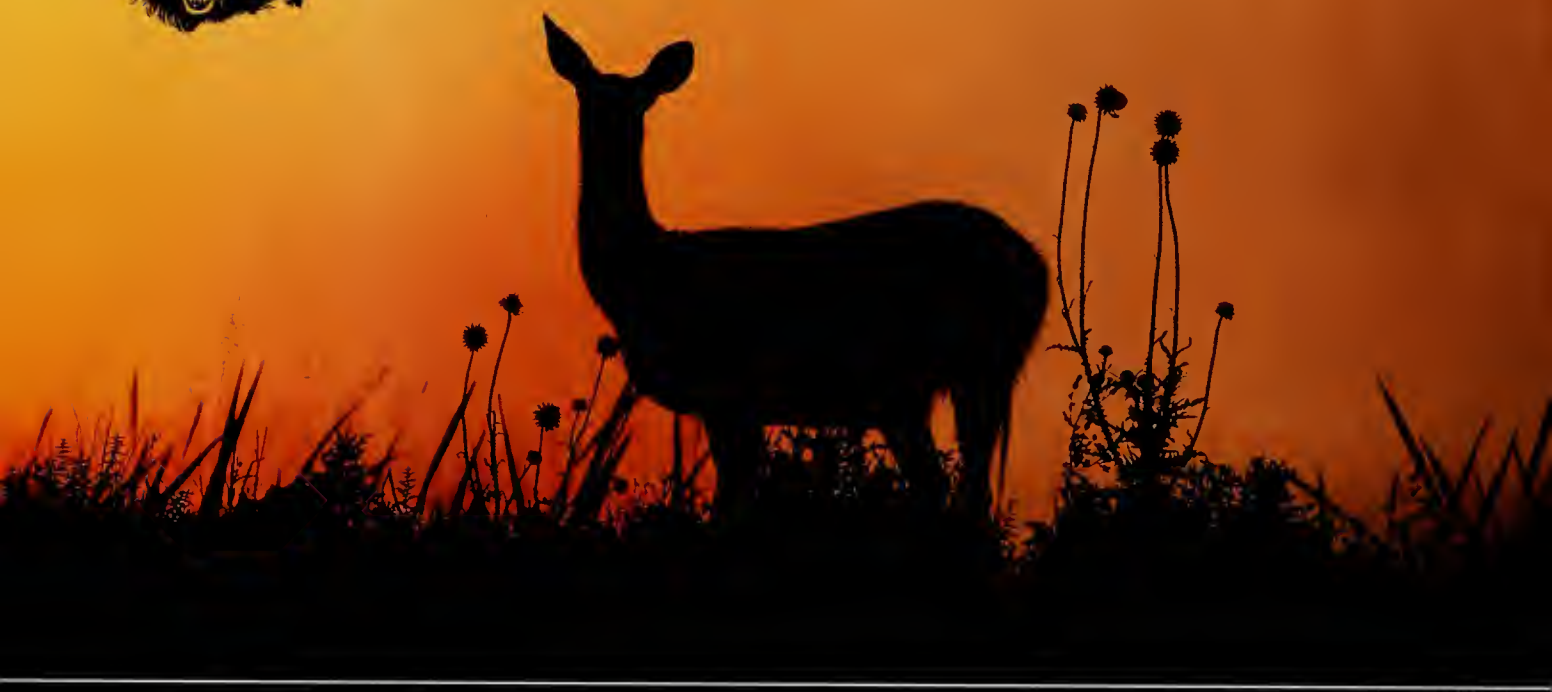
November/December 1999 $2.50

MONTANA OUTDOORS

Our Point of View



JIM PETEK

Education or regulation—which would you choose? Are regulations too complex or do people not take time to read them? Do people just make mistakes or are they purposefully and knowingly violating laws enacted to protect our fish, wildlife, and parks?

The answer is yes—some people do make mistakes, others knowingly violate. That's what makes the job of being a Montana Fish, Wildlife & Parks warden so challenging. In each encounter with a hunter, angler, camper, or park visitor, a warden must rely on his or her training and instincts to determine if this is going to be another routine, friendly visit or whether the person is covering up a violation.

Wardens are highly trained in making this type of judgment; they spend twelve weeks at a law enforcement academy, eight more weeks in field officer training on the ground, and are continually recertified in a variety of skills from whitewater rescue to use of firearms.

Failure to obey laws or to follow common courtesy can have high costs not just for the violator. Landowners often cite trespass or poor behavior by hunters or anglers as the reason for closing their land to access. Bad behavior affects all of us.

Unfortunately, the high values now placed on many wildlife species result in organized criminal activity and violations that are harder to detect. Organized efforts may include illegal outfitting, hunting without tags, poaching, and sale of wildlife parts. Because such operations are difficult for uniformed officers to penetrate, in the mid-1980s FWP created a special investigative unit. Over the years, we have broken dozens of illegal poaching operations resulting in fines, jail time, and loss of privileges (see "Operation Breaks" on page 12).

Sadly, these are the stories that often end up on the front page and around which people may form their opinion about hunters. We do not consider these people to be hunters, yet others are not so discriminating.

The 1999 Legislature gave us authority to create a "violator school" aimed at rehabilitating people who stray over the line out of confusion, ignorance, or a lack of appreciation for the consequences. We recognize that chronic, purposeful violators will not be changed by our school, and that is why we also asked the Legislature to increase the penalties for chronic violators.

TIP-MONT is another connection from you to our wardens—whether you see a poacher or park vandal, please report it by calling 1-800-TIP-MONT. Our collective future rests on healthy doses of both education and regulation to ensure that a few lawbreakers do not destroy the opportunity for the rest of us.

Patrick J. Graham, Director
Montana Fish, Wildlife & Parks

DenverBryan.com

Every year in Montana, hunters take between 45,000 and 75,000 white-tailed deer (page 2).

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Home Range

by **BEN LONG**

WHEN I FIRST MOVED to the Flathead Valley, I rented a century-old farmhouse outside a nearly extinct mill town. There was a feral hayfield right across the road. On summer evenings after the season's last cutting, I would glimpse red-flanked whitetail bucks creeping away into the timber.

I recall driving home from work late one summer evening. I was hungry and thinking about grilling a hamburger as soon as I got home. A fat, glossy forkhorn jumped the road in front of me and bounded a barbed-wire fence in two, maybe three strides.

My first thought was the deer looked...well, delicious.

So come November, my mind turned to hunting those deer. One snowy Saturday I got up before dawn, ate scrambled eggs and sausage and collected my gear. I stepped out the door with my rattling antlers around my neck, a bulging rucksack under one arm and my .30-30 carbine under the other.

The porch had this dim, yellow light. And as I pulled the door closed, I saw movement in my driveway. I squinted into the gloom. There, standing between my front porch and my car, was the object of my hunt: a white-tailed deer.

I could have ended my hunt right there except: (1) It was an hour until shooting light; (2) I probably would have shot a hole in my Toyota; and (3) I really wanted to go deer hunting that day. But thinking back to that morning, it occurs to me that deer demonstrated the genius of its species.

DenverBryan.com

Whitetails are nature's finest escape artists. Each one is Houdini on the hoof. They are very, very good at getting away. They are so good, they thrive right among their chief predator: us.

Some creatures we hunt—elk, bighorn sheep, mountain goat—require four-wheel drives or pack trains and a trek in the wilderness. Whitetails, on the other hand, are the animals we dodge on the drive to work and the creatures that devour our gardens. Whitetails are gracious enough to come to us. Hunting whitetails need not be the least bit expeditionary.

And that is a treat in its own right.

Consider this: Every autumn in Montana, hunters take between 45,000 and 75,000 whitetail deer. Whitetails vie with mule deer as the state's most popular big game animal. Some years hunters take more mulies, some years more whitetails. The totals vary, depending on hunting conditions, population fluctuations, and the like.

But Montana hunters cut and wrap 800 to 1,500 *tons* of white-tailed deer venison every year. In chops, steaks, or burger, that's a lot of protein. All natural, with no preservatives or additives.

Given modern agriculture and commerce, the average bite of food on your supper table probably traveled some 1,500 miles from its point of origin. Your morning coffee may have come from the highlands of Kenya, that fast-food burger from the plains of Argentina.

But when it comes to a hunter's venison, we know exactly where our meal came from. We know which cottonwood bottom, which alfalfa field, which woodlot. In this day and age, that is a valuable piece of knowledge.

DONALD M. JONES

Whitetails are nature's finest escape artists. Each one is Houdini on the hoof.

MIKE LOGAN

DONALD M. JONES

AFTER A COUPLE OF YEARS I moved out of that packrat-infested farmhouse. But I still return to the same rural neighborhood to hunt. I call it Stump Creek.

This is not the Montana that graces postcards and magazine covers. Stump Creek includes a grown-in beaver swamp with a small patch of aspen; logged-over uplands with an impenetrable second-growth clearcut; and a logging road closed with boulders. It is dotted with historic larch stumps, cut head-high with spring-boards and hand-held crosscut saws in the days before chainsaws.

But Stump Creek is full of whitetails. As I learn its secrets better, I like to think I am learning to hunt it more effectively. But objectively, there is not a lot of evidence for this. It may be that the longer I hunt Stump Creek, the better the deer get at surviving there.

Stump Creek is the kind of place you can hunt after working a shift or before the high school football game. It is a fine place to wait for dawn or dusk on a favorite stand. I hunker down and listen for the patter of approaching hoof-steps. Sometimes, I hear the tin-trumpets of red-breasted nuthatches. Sometimes, the tailgate rattle of pickup trucks on the washboard road.

But sometimes, I hear the hoof-steps.

There are other hunters, although I rarely see them. And they don't all wear blaze orange. Coyotes den a mile above the swamp, collecting turtle shells as chew-toys for their pups. Cougars leave tracks near the rimrock. I once found the neatly clipped tail of a flying squirrel under the roosting tree of a great horned owl.

DONALD M. JONES

There are too many roads for this patch of woods to support much of an elk herd, but I have seen moose, as well as black bears. There are plenty of ruffed grouse and a few blues on the high ridge. A wolf pack survived briefly, but it was gunned down by federal agents after disemboweling an Angus. But mostly, there are white-tailed deer.

I like to think the fawns born the first year I hunted Stump Creek are hoary old bucks now. I remember the first jaw-dropper buck I encountered. It was noon and I was walking back to the car with lunch on my mind and my rifle over my shoulder. We locked eyes at exactly the same moment. The buck was a fleeting memory before my reflexes could start to react.

I was left alone, thinking: How did he disappear so fast? Did I really see him at all?

Then a few days before the opening of the next deer season, I saw a similar buck at nearly the same spot. I was scouting for deer sign, carrying a shotgun for ruffed grouse. I walked around a bend on the logging road to see a beautiful four-by-four buck, grazing 20 yards from me. Broadside. He was so close I could watch the tendons in his jaw ripple as he clipped the tender ends from the brush. His antlers were mahogany brown and had a shine as if hand-polished.

I raised my shotgun and put the bead behind his shoulder. I held it there until my arms got tired, just watching my forbidden target. When I put the gun down, he saw the movement and stared at me, as if dumb-founded by his own carelessness.

"See you next week," I said. And he bounded away. But of course I never did see him again.

If a November morning dawns to fresh snow, I try to beg off on my responsibilities and hunt Stump Creek. Whitetails go with snow like salsa goes on tacos or beer goes with pizza.

One of my first hunts there was like that: I took my stand in a soft blizzard of huge flakes and watched the world turn white. As I waited, a deer approached through the flakes like a phantom through a mist. I thought of a line Yaak writer Rick Bass once told me: that whitetail deer take on the same color as the weather.

This whitetail doe was quiet as fog. This was a meat hunt, so I shot the deer, field-dressed the carcass, dragged it back to my car. I drove home and hung the deer in my garage to skin. Then I realized I had left my $50 Buck knife on a stump back in the woods where I gutted the deer.

So I marched back to the woods. But by now everything was covered in six inches of fresh powder and looked markedly different. I was not exactly sure where I had gutted the deer. So I started dusting the snow off stumps, looking for the one where I had left my knife. By dark, I had swept off about a hundred stumps. I never did find my knife and had to skin the deer with one from the kitchen. In all, I suppose it was a fair trade. A knife for a life.

I have a few of those stories—times when the deer did not get away. But more, oh so many more, when the

DONALD M. JONES

DenverBryan.com

If a November morning dawns to fresh snow, I try to beg off on my responsibilities and hunt Stump Creek. Whitetails go with snow like salsa goes on tacos or beer goes with pizza.

DusanSmetana.com

JIM HEUSTESS

There are worse fates than to melt into the duff of your home territory, with generations of your fawns alive all around you.

gray ghosts gave me the slip. The whitetails of Stump Creek have taught me many lessons, but mostly they have taught me humility. We humans take great pride in our brains and tend to look down upon other animals. But I wonder if a deer doesn't pity our dry, pathetic noses, our simple, ineffective ears, our leaden reflexes, and our clumsy pace.

THERE IS ONE MORE BUCK I want to tell of. I found him—or what was left of him—in an impossibly dense thicket of alder. He was just bones and a little hair mixed with the forest duff. Scapula. Ribs. Vertebrae. Skull.

From the antlers, I could tell he died between the summer velvet and winter shed. Rodents had chewed the tines down to nubs, but the main beam indicated he wore a crown of great mass, antlers spanning nearly two feet. His teeth were worn flat.

It's impossible to know what finally killed that old buck: a lion or the wolves, perhaps. A hunter who made a poor shot and was unable to collect his prize. Perhaps an injury from a battle with a rival buck sealed his fate. Or maybe the rigors of the rut combined with deep winter snows slowly drained his life's energy.

The buck had been lucky—and good—for many years. He had lived a life of peril and pulled off uncountable escapes. But none of us escapes forever. And there are worse fates than to melt into the duff of your home territory, with generations of your fawns alive all around you.

I visit those old antlers when I hunt Stump Creek. I leave them in the woods and turn them over every time I walk past. Every year, the squirrels and porcupines chew away a little more antler. Someday I suppose they will be gone.

But in the meantime, that buck's fawns and grand-fawns roam Stump Creek. I visit there when I want to hunt them. But I also visit when I just want to think. When I want to walk quietly. When I want to be alone. When I want to feel at home. ■

As Good Grayling Should

by Patrick A. Byorth and James P. Magee

Midsummer found Thomas Jefferson's Corps of Discovery in the doldrums. The men were exhausted, suffering the ravages of mosquitoes, prickly pear, and jagged river rock. Rations were lean, game and morale dwindling.

Meriwether Lewis split the expedition near Beaverhead Rock, not far from the present-day town of Dillon. Lewis and a small contingent set out to find the Shoshone and a route through the rampart guarding the Pacific; the ailing Captain Clark was to follow with the bulk of the men and supplies.

By the time Lewis and Clark arrived in Montana in 1805, Arctic grayling had flourished throughout the headwaters of the Missouri for more than 10,000 years.

When the two groups reassembled at a place called Camp Fortunate, there was much to celebrate: Sacagawea was reunited with her brother, Shoshone Chief Cameahwait, and Lewis had seen the headwaters of the Columbia. A feast, pieced together from the meager stores of the expedition and those of the river, included westslope cutthroat trout and Arctic grayling, beans and corn, beaver and venison.

With a brush drag woven of willow and dogwood, the men seined 528 cutthroat and "a douzen of a white speceis of trout," or Arctic grayling. Thus, among the significant events that transpired August 22, 1805, was the first "scientific" documentation of the grayling.

The fortunes of the Arctic grayling, however, had been cast during the Pleistocene epoch thousands of years before, when continental ice sheets blanketed North America. Grayling thrived along their margins. When the ice receded northward, grayling were left behind like footprints, testimony to the glaciers' retreat.

DALE C SPARTAS

While Meriwether Lewis first recorded the grayling at the base of the Continental Divide, he could as easily have observed it during the Corps' portage of the Great Falls, at their encampment at the three forks of the Missouri, or at numerous other places along their route. By the time Lewis and Clark arrived in Montana in 1805, Arctic grayling had flourished throughout the headwaters of the Missouri for more than 10,000 years.

Grayling are intrepid travelers, making long seasonal migrations to exploit peak conditions for spawning, rearing, feeding, and wintering. In the Madison River, for instance, grayling historically wintered in the deep pools and springs of Beartrap Canyon. Each April, when the Madison burst through its icy shroud, they reenacted an ancient spawning ritual. Some headed upstream a few miles to Meadow Creek, or spawned in the Madison where it braided through cottonwood bottoms at the head of the canyon. Many traveled 45 miles to congregate at Horsethief Springs, where stable flows and productive water gave the young a boost.

After spawning, grayling dispersed throughout the basin, some traveling to the food-rich waters of Yellowstone National Park, some turning downstream to seek other productive feeding areas. Yearling grayling wandered throughout the upper Missouri, adapting to a variety of habitats in the Jefferson, Ruby, Beaverhead, Big Hole, Missouri, Sun, Teton, Smith, and Gallatin rivers.

This wandering lifestyle represented a perfect adaptation to life in the headwaters of the Missouri, as long as the rivers ran free. But as these rivers were harnessed for hydropower and irrigation, the fortunes of the Arctic grayling changed. By April of 1903, grayling migrating up the Madison River to spawn literally swam into a wall: Madison Dam near Ennis. Old-timers tell stories of Arctic grayling "stacked up below the dam so thick you could walk across the river on their backs and not get your boots wet."

Settlers took advantage of the temporary abundance and took wagonloads home to smoke. But the abundance was short-lived, because the Madison migration route was severed. The grayling spawning grounds at Horsethief Springs met a similar demise under the waters of Hebgen Reservoir, filled in 1915. By the 1950s, Clark Canyon Dam submerged Camp Fortunate and cut off grayling travel from the Beaverhead to Horse Prairie Creek and the Red Rock River.

By April of 1903, grayling migrating up the Madison River to spawn literally swam into a wall: Madison Dam near Ennis. Old-timers tell stories of Arctic grayling "stacked up below the dam so thick you could walk across the river on their backs and not get your boots wet."

A long line of dams, including Canyon Ferry, Ruby, Hauser, Holter, and Toston, provided water vital to irrigators and supplied electricity to the new residents of the upper Missouri drainage, but left the grayling population fragmented. Other challenges—overharvest, introduction of non-native trout, and habitat changes—contributed to the demise of the river-dwelling Arctic grayling in a few short years of its centuries-long existence.

But one hardy population of Arctic grayling survived the onslaught of development to remind us of what Montana was like when Lewis and Clark named the rivers. In the upper 75 miles of the river Lewis named the Wisdom, now known as the Big Hole, this last population of river-dwelling grayling in the lower 48 states teetered on the edge of extinction. For a time, fewer than 30 juvenile and adult Arctic grayling could be found per mile in prime waters near Wisdom.

In 1987 the Arctic Grayling Recovery Program was formed to identify and mitigate factors limiting the population and to establish a brood stock that could be used to restore the Arctic grayling to some of its former range (see "Native on the Brink," July/August 1993). By the mid-1990s, the restoration program had boosted numbers to over 75 per mile, with increased presence throughout the drainage. The program was successful because local communities saw value in these native fish and banded together as the Big Hole Watershed Committee to preserve them.

Additional motivation to cooperate came in the form of a petition to list the fluvial or river-dwelling Arctic grayling as an endangered species. While the potential impacts of listing under the Endangered Species Act mobilized support for the recovery program, it also generated fears that local control would be lost. Although the Big Hole Arctic grayling population was now stable, the second component of the recovery program—restoring the grayling to portions of its historic range—was at risk. Agencies and citizens alike were caught in a "Catch-22"—in order to truly recover Arctic grayling in the upper Missouri and render endangered species status unnecessary, additional populations would need to be reestablished to buffer the risk of extinction. However, few citizens are comfortable with having an endangered species introduced into their backyard.

To allay these fears, the U.S. Fish and Wildlife Service and Montana Fish, Wildlife & Parks (FWP) entered into an innovative agreement that provides a measure of certainty that endangered status can be forestalled by significant progress toward recovery. The long-

Top photo: *By the mid-1990s, restoration efforts boosted numbers of Arctic grayling in the Big Hole River to 75 per mile—more than double the low levels of the 1980s. To census the grayling population, fish are periodically captured by electrofishing, marked, and released.*

Middle photo: *In 1997 and 1998, biologists released 40,000 Arctic grayling fry into the cool, clean waters of the upper Ruby River. Additional releases are scheduled through year 2000.*

Lower photo: *Reintroducing grayling to the North and South forks of the Sun River in the Bob Marshall and Scapegoat Wilderness Areas last summer presented a unique challenge. Double-layered plastic bags containing water, oxygen, and young grayling were placed in ice chests and packed by horses into release sites.*

JEFF & ALEXA HENRY

RANDY GAZDA

GREAT FALLS TRIBUNE/MIKE BABCOCK

range goal is to establish five viable, self-sustaining populations of fluvial Arctic grayling throughout the upper Missouri drainage by the year 2020. The interim goal is to have at least four reintroduction efforts underway by December 31, 2000.

Once again, Montanans find themselves at a crossroads, where our history and that of a native species may either remain on the same track or part company. Montana Fish, Wildlife & Parks and the cooperators in the Arctic Grayling Recovery Program are leading the charge to ensure we have a common future.

While the campaign to reintroduce Arctic grayling is new to many people, it has been underway for more than a decade. Using the combined talents of fish culturists and geneticists, managers began developing a fluvial Arctic grayling brood source in the mid-1980s. Over several years, wild Big Hole River grayling were captured during the spawning run so that eggs could be collected and fertilized. Young from each year's spawn were raised to spawning age and backcrossed with the other year classes to capture the genetic diversity existing in the wild population. Brood reserves were established in state and federal hatcheries and in a mountain lake near Ennis.

Meanwhile, a researcher at Montana State University investigated upper Missouri basin streams that were likely candidates for reestablishment of Arctic grayling populations. Grayling were experimentally stocked in the East and West Gallatin rivers and in Cougar Creek in Yellowstone National Park. The results were mixed but promising—the fish survived and grew through several winters and traveled long distances, as good grayling should. But the need was clear for long, unimpeded reaches of stream with low densities of competitors.

Equipped with a genetically representative brood stock, the Arctic Grayling Recovery Program launched its first grayling reintroduction in the upper Ruby River a few years ago. The first step was approaching the community of the Ruby Valley to openly and honestly consider the risks and benefits of reintroducing a potentially endangered species in their backyard. Understandably, some citizens were initially suspicious. Wonderfully, they agreed to take a chance.

The Ruby River upstream from Ruby Reservoir offers more than 40 miles of good Arctic grayling habitat. Indeed, before the dam was built, Arctic grayling thrived there. One early settler related a memorable trip up the Ruby—the last he enjoyed in a buckboard before resorting to an automobile—when he, his father, and a hired man camped under the stars near the three forks of the Ruby and caught, cooked, and ate Arctic grayling. The deep pools, runs, and gravel bars of the upper Ruby still carry the clean, cool water sought by this species.

After careful planning and considering myriad variables, biologists released 30,000 Arctic grayling fry in the fall of 1997, followed by 10,000 more in 1998, with additional plants slated into 2000. Within three months of the initial plant, the fingerlings grew an inch and held their ground. As fluvial Arctic grayling should, they ignored the reservoir even through harsh winters and stayed in the upper basin. In April of 2000 the first grayling plants will become sexually mature. Thus, the first Arctic grayling in the Ruby in over 50 years may be hatched in the wild next spring!

Another auspicious event in the annals of Arctic grayling history took place this summer when fish were stocked in the North and South forks of the Sun River upstream from Gibson Reservoir. The fact that these reintroductions took place in the Bob Marshall and Scapegoat Wilderness Areas presented some logistical challenges. Utilizing a combination of pack stock and rubber rafts, biologists transported 12,000 young grayling for release in these pristine rivers this past July. State and federal fisheries biologists will closely monitor this year's plants and others scheduled through 2002 in hopes of seeing wild, self-sustaining Arctic grayling populations develop.

The conspicuous absence of Arctic grayling along the Lewis and Clark Trail may be rectified by three additional reintroductions now in planning stages.

At the junction of the Gallatin, Madison, and Jefferson rivers at Three Forks, the rivers suffer a variety of habitat, temperature, and flow problems. Trout densities there are low relative to those of nearby blue-ribbon streams. With few competitors and access to miles of river in each of the forks of the Missouri, Arctic grayling may be able to exploit habitats that will enable them to survive.

The section of the Beaverhead River lying in the shadow of Beaverhead Rock offers another potential area for grayling reintroduction. Unlike the renowned tailwaters of Clark Canyon Reservoir, this reach supports low densities of brown trout. Water releases from the reservoir create a "backwards" pattern, where high flows come in late fall and early winter. This anomaly, along with whirling disease and some habitat problems, leaves a gap where grayling may thrive (grayling are largely resistant to whirling disease). Fish stocked here will have access to over 40 miles of potentially suitable habitat in the Beaverhead, Jefferson, and lower Ruby rivers.

The hue and cry of critics is inevitable when attempting any action to preserve a species. Some people say there is no point in trying to turn back the clock. Yet, Montanans share a common responsibility to protect and maintain all the resources we have been endowed with, not just the beautiful, powerful, or popular. If we could ask Cameahwait or Lewis and Clark how we should treat the Arctic grayling, we believe the answer would be, "Treat them with respect." With good luck and hard work, Arctic grayling will again wander the waters of the Missouri, as good grayling should. ■

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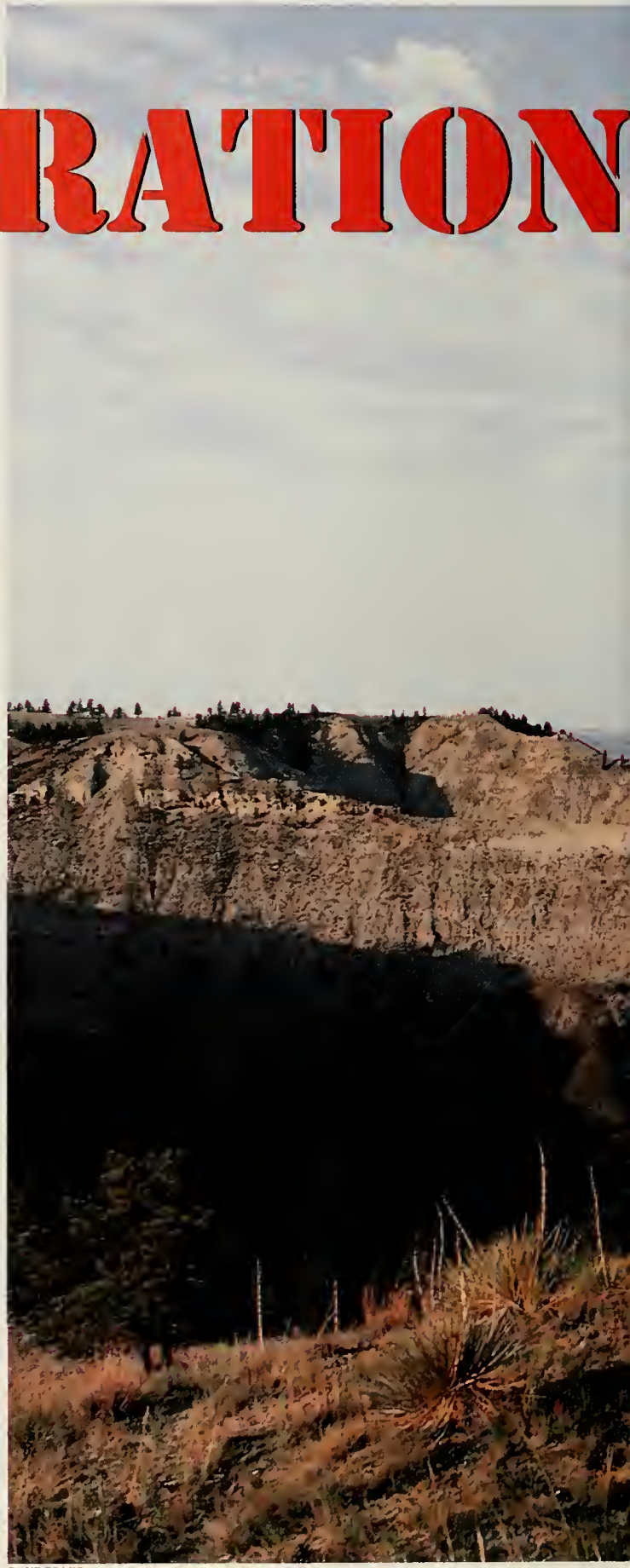
OPERATION

by Bruce Auchly



DAVE BOOKS

LATE IN THE SUMMER of 1994, Montana game warden Shane Reno received a tip that the Flansburg brothers, Danny and Lloyd of Hays, were illegally killing deer and elk in the geographically rough and tumble area known as the Missouri Breaks. "We had heard lots of rumors," Reno recalls. "But this individual called up with some fairly specific information."

That single phone call led to one of the most important cases ever for the Montana Fish, Wildlife & Parks (FWP) Law Enforcement Division: 16 people cited for 11 felony and 71 misdemeanor violations. Danny, 29, and Lloyd, 31, together were fined $23,400 and each lost his hunting, fishing, and trapping privileges for 10 years. A third brother, Jim, 37, was fined $2,500 and lost his privileges for five years. Six Indiana men and one from Idaho were also snared in the operation. They paid $24,390 and had their privileges revoked for periods ranging from two years to 10 years. Based on the game violations the group was charged with, they could have paid $111,425 in fines and restitution.

FWP wardens say this case was about the commercialization of wildlife and illegally guiding nonresidents. Although he pled guilty to the charges against him, Danny Flansburg claims he never illegally guided anyone or poached until forced to by undercover game wardens. But he allows that he killed more than his share of animals. "I guess I did more than I should have," he says.

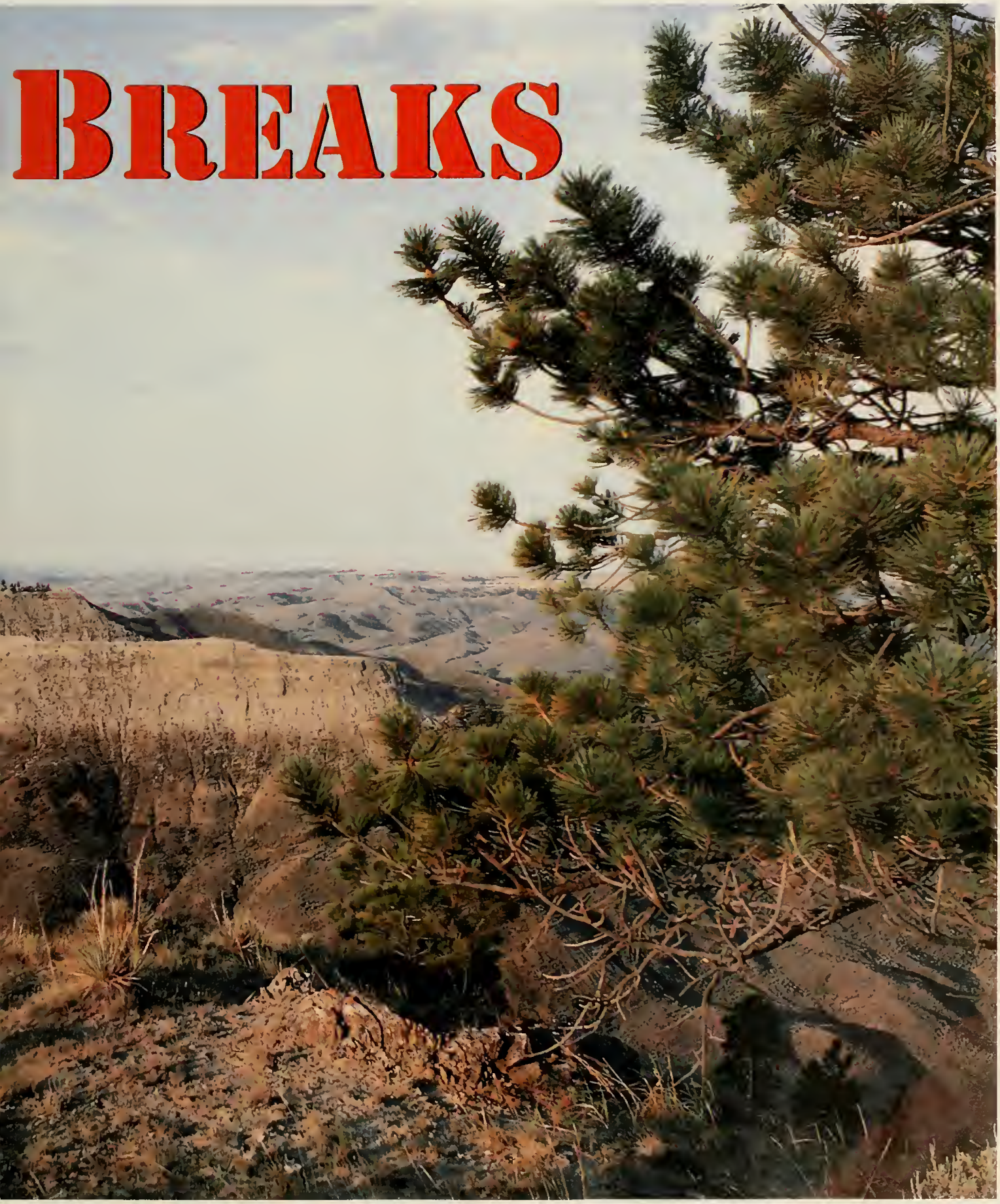
This is the story of Operation Breaks.

Back in 1994, Reno was working out of FWP's Havre office. He's still there; still getting 50 to 60 tips a year about illegal activity. About half go directly to him. The rest are called into the department's statewide TIP-MONT program, which routes information to the appropriate field warden. This call came to Reno's house.

Because of the detailed information involved, which Reno won't talk about for fear of revealing the identity of the confidential informant, he began to jot down everything he knew about the Flansburgs and Hays, Montana.

Hays, population 333, is on the Fort Belknap Indian Reservation. The tiny town rests in the southwest portion of the Little Rockies mountain range on the north shore of the Missouri River. From the Little Rockies one can peer into the

BREAKS



RIGHT: *These trophy animals seized as evidence in the Operation Breaks investigation helped convict 16 members of a poaching ring led by the Flansburgs.*
BELOW: *Danny Flansburg poses with a bull elk he killed illegally on the Charles M. Russell National Wildlife Refuge in November of 1995.*

RICH FURBER

FWP PHOTO

remote Missouri River Breaks and the federal Charles M. Russell National Wildlife Refuge. On the reservation, enrolled tribal members may hunt with a tribal hunting license. Off the reservation they need a state hunting license, like every other Montana hunter. The Flansburgs were neither enrolled tribal members nor did they have state hunting licenses. Reno's informant said the brothers and others were illegally shooting big game animals off the reservation.

At the time, Reno had been a uniformed game warden just four years. Youthful enthusiasm aside, Reno knew he would never be able to penetrate a local poaching ring in tiny Hays. He needed help. During the winter of 1994-95, Reno's scribbled notes grew into a formal request for an undercover investigation. The plea went to Warden Captain Rich Furber stationed in Glasgow. Furber approved the request and shipped it to Helena, where it entered the secretive world of FWP's Criminal Investigation Section (CIS).

The CIS started in eastern Montana in the mid-1980s. It was the brainchild of a field warden who realized that a uniformed officer could not make headway into small town poaching rings or stop the illegal commercialization of wildlife—people paying money for trophy animal heads and parts.

"People need to realize that anytime a dollar bill mixes with a resource, there's potential for the resource to lose," Furber says. "If you develop a market for bighorn sheep, you're going to wipe them out. If you develop a market for big bull elk, you're going to wipe them out."

By the early 1990s, CIS was reorganized and moved to Helena. Given a supervisor, a secretary, and a regular budget, the unit sharpened its focus. "The top priority is the illegal commercialization of the state's wildlife resources," says Kevin Clader, CIS supervisor. "Commercialization includes illegal outfitting. Another priority is investigating very criminally active individuals, like a habitual wildlife violator. Someone who just likes to kill wildlife."

The Flansburg case was assigned to an undercover warden we'll call Roger. Roger is a fake name, but Roger is a real person. For his personal safety and future usefulness, nothing about Roger can be revealed. He might be tall or short, old or young, fat or skinny. He could have blond, brown, or red hair. Maybe he's bald and walks with a limp.

Clader is the aboveground, visible contact for CIS. He's willing to talk about the philosophy and goals of his unit, just not any details of the operation: "My number one concern is the safety of the investigators. The fewer the questions posed, the better."

In the spring of 1995, Roger began traveling to Blaine and Phillips counties, posing as a nonresident prairie dog hunter. While visiting the area, Roger met the Flansburgs. More importantly, he got invited back in the fall.

Roger and another Montana undercover warden returned to Hays on November 12 for a four-day guided elk and deer hunt on the CMR National Wildlife Refuge. The hunters had valid nonresident big game hunting licenses. They did not have the special permits required to elk hunt on the CMR. The Flansburg brothers also were not licensed outfitters. They made up for that lack of paperwork with local wildlife knowledge.

"These guys knew that country like the back of their hand," Roger says. "They knew where those elk were and where they were going. On this first illegal hunt the Flansburgs guided us and directed us to kill a deer and a bull [elk]."

Roger also bagged another invitation. On November 24, Roger was back, this time with an out-of-state undercover warden. On that second hunt, Danny Flansburg took the two men to the CMR. They quickly came across a herd of elk with at least two large bulls. Soon everyone lined up and started shooting. Because Danny was shooting, too, the wardens intentionally missed and let their guide do the killing.

"Danny killed the two big bulls," Roger says. "He had us

tag them with our general elk permits. Then he recruited his cronies and friends to come down to the CMR to cut up the elk, and then sneak the illegal elk out after dark."

New investigations began to spin off focusing on other members of the poaching ring, but the Flansburgs remained at the center. As the brothers became comfortable with the wardens, they opened up about guiding other nonresident hunters on similar illegal hunts. Roger added those conversations to other bits of information he developed during the case. For visitors, Hays offers one bed and breakfast. Hunters, legal and otherwise, stay there, which inevitably leads to small talk, big tales, and swapping stories. "That's a third of the work," Roger says. "You're listening carefully for information and for windows of opportunity."

In late November 1995, two days after the last illegal hunt, Danny called Roger. He claimed to have a freshly killed full-curl bighorn sheep for sale. Mature bighorns are worth tens of thousands of dollars on the black market. Even a legal guided hunt can be very expensive. The next day, Roger met the Flansburg brothers and a friend. The four headed into the Little Rockies and retrieved a half-curl sheep head along with the cape and meat. Roger paid Danny $300.

Like many sting operations, Operation Breaks entered a gray area in which the suspect claimed he was pressured or trapped into committing a crime. Danny says Roger badgered him for sheep heads. "He offered me $5,000 for a full-curl ram," Danny says. "I wish they hadn't pushed me to extremes or I wouldn't have done it."

Roger denies the entrapment accusation: "We are very careful to avoid any entrapment issues. In this case, Danny had a history of dealing in animal parts."

One month later, Danny called Roger saying he had a record-book bighorn for sale. At the same time, the investigation took an odd detour. In December of 1995 after the big-game season closed, Danny killed a six-point bull elk, cut off the antlers, and sold them for $110 to Pacific Hide and Fur in Havre. Field warden Shane Reno had purposely stayed away from Roger and the investigation. But this was a tip and he couldn't ignore it. He gathered evidence, talked to witnesses and confronted Flansburg, who admitted the crime. Reno asked for the carcass, which Flansburg gave him. DNA tests on the meat revealed it came from a cow elk.

"Not even the elk he shot," says Warden Captain Rich Furber. Middle-aged and stocky with a shock of white hair, Furber has been a warden for 27 years. Before that he was a schoolteacher and still retains the patience that comes from dealing with adolescent mischievousness. However, this upsets him. "How many elk does this idiot shoot in a year?"

The brush with the law didn't stop Flansburg. On February 14, 1996, the day Danny was arrested for illegally shooting the bull elk, he poached two bighorns. Two weeks later, Danny and Lloyd met Roger at a café near Roy, Montana. A box in the back seat of the Flansburgs' car contained the heads of two freshly killed, half-curl rams. Roger paid the brothers $1,000 for both sheep.

Asked why he poached, Danny gives a simple answer: "Out of stupidity." Danny says the case ruined his life, though he never says he's sorry for his actions. One of his excuses is a life of poverty. "When I grew up, poaching wasn't poaching. It was getting food."

Danny's ancestry is Chippewa-Cree, but he lives on a reservation of Assiniboine and Gros Ventre people. Not white and not an enrolled tribal member, he's an outsider in two worlds. Since his arrest he says he has become the local laughingstock and worse. "I've gotten death threats."

Danny fights fires and pounds nails to scratch out a living. Once he wanted to be a guide. After a stint in guide school, he says, his first group of hunters was the undercover wardens. He dreamed of a career in law enforcement. That, too, has vanished: "I wish I hadn't got the felonies. I was planning on being a police officer. This really screwed that up."

He says he now works with youth, trying to steer them along the right path, not the one he took. He's also found religion: "It made me believe stronger in God."

BY THE SUMMER of 1996, FWP's undercover team was back shooting prairie dogs, lining up one last hunt. "We had enough on the Flansburgs," Roger says. "But we wanted to gather more on the nonresidents."

On September 23, 1996, Roger and another undercover Montana warden met Danny for a three-day guided bow hunt. Danny took along a rifle. One late afternoon the three men spied a herd of elk out of archery range. "We were not going to be able to get to those by dark," Roger recalls. Danny bailed out of the vehicle. "Fifteen minutes later we heard a couple of shots," Roger says.

With a rifle, Danny shot a bull elk during archery season. He didn't have a permit to shoot any elk in any season, and he was trespassing on private property. "I felt bad for them because they didn't get an elk," Danny explains. "They coerced me into shooting one. Afterwards I felt bad about it."

The wardens tagged the elk, paid Danny and left. They never hunted with the Flansburgs again, though several other nonresidents did. Danny kept calling Roger through the winter with stories of guiding hunters from Indiana, New York, and Minnesota.

On April 17, 1997, the fieldwork of Operation Breaks came to a close with the arrest of Danny, Lloyd, and two others. Within days another dozen people—residents and nonresidents—were arrested. Cooperating with CIS were FWP field wardens, investigators from the U.S. Fish and Wildlife Service and federal Bureau of Land Management, and the sheriffs' offices in Blaine, Fergus, and Phillips counties.

Most of the cases were settled by the end of 1998. Although 16 people were cited, CIS investigated 34 individuals. Of those not charged, some are nonresidents, others have disappeared, one died in a plane crash. A few are still under surveillance. One faces possible federal charges.

The poaching ring killed 34 elk, 32 deer, 11 bighorn sheep, 10 antelope, and 12 gamebirds, investigators say.

"In Montana," Roger says, "We have incredible resources: deer, elk, bear, sheep. These people were robbing the lawful hunter of the opportunity to hunt these animals."

For his part, Danny claims no hard feelings toward Roger or the other wardens. Even says to tell them hello. They were just doing their job, he says. "I made the mistake of trusting them." ■

PUBLIC HUNTING ACCESS: An Elusive Quarry

by Alan Charles

Gather your gear and come along, for we are embarking on a hunt for the most elusive of all beasts, a creature whose harvest will make us the most revered hunters of all time. Capturing this critter will not yield any trophy horns to hang on our wall, or even food for the family table. But if we succeed in our quest, this will rank as the best of all hunts.

Many others have tried and failed. This hunt has gone on since the earliest days of North American hunting. Tracks carpet the countryside, and though many a shot has been taken, the beast has always escaped.

The quarry we'll pursue is *a definition of what is meant, and can be universally accepted, as controlled public hunting access to private property, with reasonable restrictions that will provide for a balance between "quality" and "quantity" hunting.*

The very words "public hunting access" are problematic. Who is the public? Is the local merchant who befriends a landowner and helps out at brandings any more or less "public" than a stranger who appears at that same rancher's doorstep on opening day of deer season? Are resident hunters more public than nonresident hunters, thereby deserving of access preference? Are hunters who pay access fees any more, or less, public than those not willing to pay access fees, and subsequently more or less deserving of access preference?

And what is meant by "access?" Does it necessarily mean free access? Does it mean equal access for all people, or can it mean access with preference given differently to different people? Is access granted with restrictions the same as access granted without restrictions?

What are "reasonable" restrictions? And how do we achieve some sort of acceptance among diverse groups of landowners, hunters, and Montana Fish, Wildlife & Parks (FWP) staff about what is "reasonable," what is "quality," and what is appropriate "quantity."

DALE C. SPARTAS

GEORGE WUERTHNER

These are difficult, complex questions, yet they are dear to the hearts of all who are interested in hunting in Montana, or who own land in Montana where hunting might occur. The issue of private land access affects nearly every aspect of FWP business, whether it's issuing licenses to hunters who expect to have places to hunt, dealing with landowners who seek relief from the impacts of allowing public hunting and providing wildlife habitat, or making policy decisions that determine bag limits, license quotas, and program needs for wildlife habitat and hunter access.

The statute defining landowner eligibility for game damage assistance states that a landowner must "allow public hunting during established seasons" or "not significantly reduce public hunting through imposed restrictions." But the statute doesn't define the level of public hunting that must be allowed, or what restrictions might significantly reduce public hunting. So we are left trying to make our decisions without having developed a mutually acceptable definition of public hunting access.

The enhanced Block Management Hunter Access Program is designed to offer incentives to landowners who allow public hunting access on private land, yet we constantly struggle to find some sort of balance between the quantity of hunting access provided and the quality of the hunting opportunity.

These aren't new issues, but they are very important issues, and unless we can find some common ground where we are all speaking the same language, we will continue to find ourselves mired in conflict, with landowners on one side of the fence, hunters on the other side, and FWP and the wildlife itself tangled in the wire.

While Montana encompasses 140,000 square miles of land area, approximately 65 percent of the land is privately owned. That means there are over 60 million acres of private land within the state borders. How much of this land is open to public hunting? It all depends on how we define public hunting.

DALE C. SPARTAS

Montana landowners have traditionally been generous about inviting hunters onto their land. Part of that tradition is rooted in the public trust doctrine, a loosely woven set of court cases and policies that basically grant to the public the right to take game in a lawful manner. Courts have long held that game animals—birds, mammals, and fish—belong to the state, not the owner of land on which the animals live. Landowners, however, may grant or restrict public access to their land. Most Montana landowners have recognized and supported the hunter's role in regulating wildlife numbers.

But Montana is changing, and many of the traditions that once determined relationships between hunters and landowners are also changing. We are living in an era of record-high game populations—a true success story in terms of wildlife restoration and hunter opportunity—yet a discouraging story to landowners who bear the brunt of high game numbers as a direct financial impact. We are living in a time of changing land ownership, where traditional farmers and ranchers are being replaced by owners who buy property precisely to control access, often taking land out of agricultural production and decreasing wildlife habitat through subdivisions and poor resource management. We are living in a time of desperately low farm and ranch economies, with people struggling to stay on the land by diversifying their income.

At the very core of this issue is the nut that needs to be cracked: *How can landowners be encouraged to provide wildlife habitat and tolerate the impacts associated with wildlife, and yet allow some acceptable level of public access to that wildlife resource and tolerate the impacts associated with public hunting?*

Nearly 70 years ago, Aldo Leopold, one of the pioneers of North American wildlife management, recognized public access to private land as a cornerstone of game management. In a 1931 report entitled "Game Survey of the North Central States," he wrote: "Recognize the landholder as the custodian of public game on private lands, protect him from the irresponsible shooter, and compensate him for putting his land in productive condition. Compensate him either publicly or privately, with either cash, service, or protection, for the use of his land and for his labor, on condition that he preserves the game seed and otherwise safeguards the public interest. In short,

DAVE C. SPARTAS

Opposite page: *Many Montana landowners enjoy renewing old friendships, or forging new ones, during hunting season.*
Left: *Many hunters like FWP's Block Management Program because it guarantees them a place to hunt, but become frustrated when these areas receive too much pressure.*

make game management a partnership enterprise to which the landholder, the sportsman, and the public each contribute appropriate services, and from which each derives appropriate rewards."

In his 1933 book, *Game Management*, Leopold also wrote: "There are conflicting theories on how to bring the land, the means of payment, and the love of sport into productive relationship with each other. No one can confidently predict which theory is 'best.' The way to resolve differences is to bring all theories to the test of actual experience. The 'best' plan is the one most nearly mutually satisfactory to three parties at interest, namely the landowner, the sportsman, and the general public. No other plan is likely to be used."

While Leopold later cautioned that simply providing private landowners with "gate receipts" was a mistake, he never wavered from his belief that private landowners hold the key to preserving North American wildlife, and that the impacts associated with public hunting and providing wildlife habitat need to be addressed through cooperative plans developed by landowners, hunters, and wildlife management agencies.

So what is the best plan, the best system for managing wildlife on private property, the best balance regarding public hunting access on private property, the best way to balance quality with quantity? Do we even know enough, yet, to answer that question?

Certainly, landowner attitudes toward wildlife are at the core. Wildlife is most often viewed by landowners as simply a part of the land—often an indicator of the health of that land—and in many ways an aesthetic of the land, much like the trees and rocks and shadows of the sun. Yet wildlife can also impact the landowner's ability to make a living from the land, and tolerance for wildlife damage is directly related to farm and ranch economics.

Wildlife damage is in itself a very complex issue, one that is far more complicated than simply believing that if a landowner allows hunting he won't suffer wildlife damage. One landowner might suffer costly wildlife damage simply because his neighbors manage their land in ways that create a problem. Or game causing the damage may not even be present on his land during the hunting season. Or the hunters who show up to help solve the game damage problem may only be interested in shooting the two bull elk or five bucks available in a local herd, leaving the overabundant cows or does unharvested. So, landowners have widely varying attitudes toward wildlife damage, in many cases aggravated by a perceived lack of social recognition for their role in providing wildlife habitat.

The other landowner attitude involved with this discussion is one best summed up in a quote from a Montana rancher participating in a 1989 landowner/sportsman conference. "Wildlife can be a nuisance to ranchers, because it forces them to deal with people who want to enter their property to hunt....When our city cousins come out to enjoy the open space, many of them act as though they own the countryside. When I go to the city for recreation, it seems I am expected to pay for the entertainment and also for the parking privilege."

In one report on landowner attitudes toward public access, the three most commonly cited reasons for closing land to hunting were: (1) poor hunter behavior/attitude; (2) vandalism/destruction/theft; and (3) trespassing. The truth is that some landowners don't allow public hunting access simply because they dislike inviting strangers on their land, while others have had negative experiences that make them less likely to take another chance.

Providing public hunting access can affect landowners in both subtle and dramatic ways. It takes time to deal with hunters, answer their inquiries, and explain the ranch rules. Noxious weeds unwittingly introduced by a hunter can result in financial impacts to a landowner, both in terms of costly control efforts and in loss of forage for livestock and wildlife. Roads and fields rutted by hunters' vehicles can degrade the environment and interfere with the daily activities involved in running a farm or ranch. A gate carelessly left open can destroy a carefully nurtured livestock breeding program or result in many hours of labor required to herd animals back where they belong.

Although both wildlife and public hunting access can have negative

impacts, Montana's private landowners have historically balanced these impacts with the positive aspects that go hand in hand with sharing the land and the public wildlife resource. Many Montana landowners look forward to hunting season as a time to visit with old friends, meet new ones, and share with pride the land they feel blessed to own and care for.

DONALD M. JONES

Because two-thirds of Montana's land area is privately owned, some level of public access is critical to preserving our hunting heritage.

As Jim Peterson, president of the Montana Stock Grower's Association, once pointed out, "The land ethic that exists within the agricultural landowner community could be one of the sportsman's most powerful tools to work with in the future. Good land stewardship ethics—passed from one generation to the next—have been the cornerstone of wildlife restoration in Montana. License and federal aid dollars could not have produced one head of big game if Montana had not been in a compatible land use by people in agriculture. Agriculture's land ethic is one that says 'If you're good to the land, it will be good to you.'"

If those are the pertinent attitudes of landowners, what, then, are the pertinent attitudes of hunters seeking access and wanting both quality and quantity in their hunting? A 1995 report compiled by the Western Association of Fish and Wildlife Agencies captured one glimpse of those attitudes. According to the report, nearly half of those surveyed indicated that not having enough access to places to hunt had taken away from their enjoyment of the sport, and more than a fifth said not having access to enough game animals had diminished their enjoyment.

Montana residents are willing to accept lower wages and sometimes more difficult living conditions in part because of the beauty of the land and opportunities to engage in outdoor recreation. In a 1998 study entitled "Montana: People and the Economy," the "scenic beauty and open space" and "opportunities for outdoor recreation" were cited as two of the five most important reasons people chose to live in Montana. One respondent said, "I think the great thing is to be able to take a weekend off and go a half hour and get up in the hills...to go out with my son and have it be just him and me. I think my family is more important to me and the values that I can give my son than any money is ever going to be."

Looking even closer to home, I can relate the lessons we are learning as we administer the Block Management Hunter Access Program. Because the program is designed to identify landowners who allow public hunting, we see ever-increasing use of these areas. In essence, FWP has done the hunter's homework for him. Hunters like the program because they don't have to invest as much time and effort in locating a place to hunt.

Yet, that is a two-edged sword, because increased use of these areas naturally increases the impacts; hunters are either frustrated that some areas receive more hunting pressure than they deem acceptable, or they find themselves unable to obtain access because hunter use is limited. Quality versus quantity—is there some happy medium, some way to have it both ways?

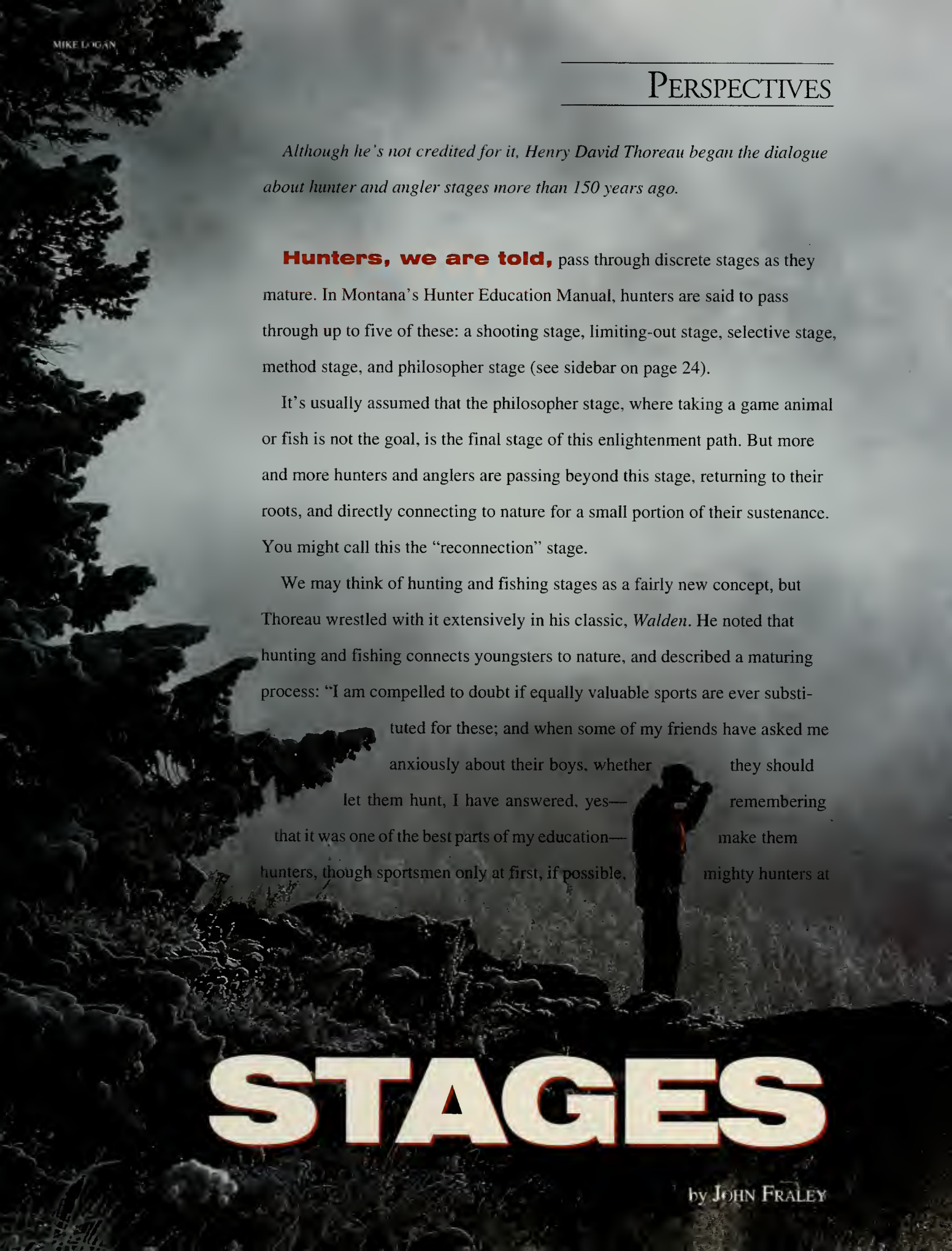
On August 25, 1999, Governor Marc Racicot addressed the newly appointed members of the Private Land/Public Wildlife Advisory Council, asking them to develop recommendations to help achieve the following goals:

- Preserve Montana's hunting heritage.
- Provide public hunting access on private land and isolated public land.
- Reduce landowner impacts related to public hunting access.
- Provide tangible benefits to landowners who allow public hunting.
- Help outfitters stabilize their industry and improve their image.

In the coming months, this citizen's advisory group will be seeking input from other Montana hunters, landowners, and outfitters about what they feel are the answers to Montana's conflicts between private land and public wildlife, particularly those related to public hunting access.

At a symposium entitled "Fee-based Hunting and the Public Trust," FWP biologist Jim Posewitz admonished listeners to "...remember it was landowners and outfitters who stood with the hunter in defense of wild country, game ranges, and a long litany of other issues. It is not a time for divisive rhetoric, but for reasoned communication among old friends."

So that is where we are now, as we prepare to embark upon our hunt. We must join together in this quest, a quest that could yield the ultimate trophy. We are like hunters gathered around a campfire in a camp where new snow is falling, enough snow to reveal tracks and identify the game, yet not so much that it will hinder our efforts to follow the quarry. We have shared our tales, made our plans, and now we must go afield. If we succeed, we stand revered, and we leave behind a legacy—Montana's hunting heritage—for our children, and their children, to embrace and continue. But if we fail, if we stray from the tracks and go our separate ways, hunting alone instead of together, this most elusive of all beasts may yet again escape, this time taking with it our very ability to engage in the hunt. ■



MIKE LOGAN

STAGES

by JOHN FRALEY

Although he's not credited for it, Henry David Thoreau began the dialogue about hunter and angler stages more than 150 years ago.

Hunters, we are told, pass through discrete stages as they mature. In Montana's Hunter Education Manual, hunters are said to pass through up to five of these: a shooting stage, limiting-out stage, selective stage, method stage, and philosopher stage (see sidebar on page 24).

It's usually assumed that the philosopher stage, where taking a game animal or fish is not the goal, is the final stage of this enlightenment path. But more and more hunters and anglers are passing beyond this stage, returning to their roots, and directly connecting to nature for a small portion of their sustenance. You might call this the "reconnection" stage.

We may think of hunting and fishing stages as a fairly new concept, but Thoreau wrestled with it extensively in his classic, *Walden*. He noted that hunting and fishing connects youngsters to nature, and described a maturing process: "I am compelled to doubt if equally valuable sports are ever substituted for these; and when some of my friends have asked me anxiously about their boys, whether they should let them hunt, I have answered, yes— remembering that it was one of the best parts of my education— make them hunters, though sportsmen only at first, if possible, mighty hunters at

last, so that they shall not find game large enough for them."

Thoreau noted that most New England boys of his time hunted and fished, and that they often chose these pursuits rather than staying in town to "play on the common." Thus even in the mid-1800s, hunting and fishing offered a positive alternative to the town commons, now often thought of as the mall.

Extending the concept of stages to social development, Thoreau lamented that townspeople don't stay connected to nature as they grow older, and implied that it would be better if they did. In Thoreau's mind, many hunters and anglers eventually stop taking fish and game animals, thus, as he wrote, "the embryo man passes through the hunter stage of development."

Thoreau recognized that hunters may seek recreation at first, finally progressing to a stage where taking an animal is no longer their main goal. In his mind, this "philosopher stage" was the highest endpoint.

Many modern hunters and anglers, seeking to rediscover and in a small way relive their wildlife-as-sustenance heritage, would disagree.

Throughout *Walden*, Thoreau contradicts himself on this point. Thoreau himself seemingly passed through various stages of thought about hunting and fishing as he wrote *Walden*: He wrote, after leaving Walden Pond, "There is unquestionably this instinct in me which belongs to the lower orders of creation; yet with every year I am less a fisherman, though without more humanity or even wisdom; at present I am no fisherman at all."

As Thoreau scholar Perry Miller notes, Thoreau lived at Walden from 1845 to 1847, except for a brief stint in a Concord jail for refusing to pay his poll tax (this resulted in his acclaimed essay, "Civil Disobedience"). Miller notes that *Walden* is a carefully crafted creation, written and revised over a five-year period after Thoreau left Walden Pond. That may explain Thoreau's evolution through the hunter/angler stages seemingly as the book progresses. Ironically, Thoreau may have become disconnected to nature, leading him to write that hunting and fishing were no longer important to him. He even acknowledged this, writing that if he were to return to the woods, he "should again be tempted to become a fisher and hunter in earnest."

While actually living at Walden, Thoreau's passion and connection to nature flows through his words: "As I came home through the woods with my string of fish, trailing my pole, it being now quite dark, I caught a glimpse of a woodchuck stealing across my path, and felt a strange thrill of savage delight, and was strongly tempted to seize and devour him raw; not that I was hungry then, except for that wildness that he represented."

Through those words, Thoreau made perhaps the clearest statement ever of why hunters and anglers eat game and fish. It's not for the calories, it's for something more intangible.

Another nature philosopher, James Swan, in his recent landmark book, *In Defense of Hunting*, notes that some psychologists say that people pass through eight sequential psychological stages in their lifetime. He says that hunting and fishing offer an "enormous potential to learn life's lessons...through firsthand encounters with life and death." This is the time when children learn life's basic lesson that "flesh eats flesh."

Hunting and fishing, Swan says, offer "natural highs" for young adults; they have an element of danger. If adolescents tie to nature, they are less likely to yield to peer pressures for negative things. He says that in tribal societies, adolescents become men through initiation rituals. They learn to kill quickly, and to share the bounty with family and friends.

Swan feels that hunting represents a vital part of the maturation of children in general. He says that when children live in urban areas they don't learn about death, guilt, and the killing of living things for food—the foundation for developing a healthy reverence for life. He notes that in the U.S., farmers slaughter 35 million cattle, 6 to 7 million sheep, 85 million pigs, 400 million chickens, and 300 million turkeys. "This all takes place," he writes, "out of sight of most people, so we are shielded from one of life's most important truths—that we kill to live." He concludes that one of the main causes of the violence and lack of value for human life among children today must be "their loss of first-hand contact with the life and death processes of nature."

For adults, writes Swan, hunting is an important family

DONALD M. JONES

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Opposite page: *Youngsters who hunt learn about death and the killing of animals for food—the foundation for developing a healthy reverence for life.*
Left: *Some proponents of catch-and-release fishing have misguided motives. Catch-and-release should be viewed as a useful management tool for heavily fished waters, not a final stage of angler enlightenment.*

activity and a reservoir of spirit. As hunters mature, they combine instinct and intellect to create passion for the hunt and the food it provides. "As hunters go through life," he writes, "if they follow the spirit of the hunt faithfully, they are guided through the issues of the life cycle. Times may change, and people may change too, but nature is always there and so are the instinctual energies that call us to hunt."

Aldo Leopold, in *A Sand County Almanac*, also recognizes that young hunters pass through stages. He says there is value in an experience that reminds us of our history: a boy scout who tans a coonskin cap, a farmboy who checks his traps before breakfast (reenacting the romance of the pioneers and the fur trade). These experiences, Leopold says, make youngsters more culturally prepared to face the realities of the present. "Ontogeny repeats phylogeny in society as well as in the individual," he writes.

Development of the hunting psyche is not restricted to boys and men. Philosopher Mary Zeiss Stange, in *Woman the Hunter*, talks of her maturation as a hunter. At first she was content to accompany her husband on his hunts. Later she found it vital to connect more directly and personally. "Unless I participated in some way...in procuring meat," she writes, "I would feel impelled to give up eating it. I could not always let the blood be on somebody else's hands...." Stange notes that the number of female hunters is growing steadily and will continue to increase as girls have more and more female hunters as role models. Throughout the book, Stange challenges the notion that females are somehow less emotionally equipped to hunt and kill game.

Anglers, many people believe, also pass through a number of discrete stages as they mature. Portrayed as a linear passage where in the final stage no fish are killed and kept, it's a tidy idea. But like most attempts to simplify or label hunter/angler motivations and attitudes, it falls far short of the truth.

John Gierach, flyfishing author of the hip books, *Trout Bum*, and *Sex, Death, and Flyfishing*, pokes fun at the concept. He laments that when he was a kid, the object of fishing was to catch lots of fish to eat, but "Now you're expected to progress upward through the various states of enlightenment from lots of fish, to big fish, to the few truly difficult fish (releasing them all, naturally), until one day your pure soul finally leaves the physical plane altogether in a flash of blue light, leaving behind nothing but a pair of singed hip boots."

To Gierach and many other anglers, the catch-and-release stage is only a stop along the way to enlightenment. He even implies that demanding that all fish be released is not only wrong, it's a form of bigotry.

In his essay, "The Purist," Gierach uses the words, "inherent snootiness," to describe strict catch-and-release flyfishing. The purist, he says, may become a snob who thinks fishing with a spinning rod is "sleazy and cheap" and who may feel personally superior to people who fish any other way.

But to the truly enlightened, he writes, "the frying of a few fish is a small but meaningful act of heresy, which, aside from the culinary experience, is why some of us like to do it."

Gierach says that he and his friend, after catching and releasing numerous trout in a week, like to "kill and eat a few, just to sort of check in with reality."

The snobbery of flyfishing purists, notes Gierach, may even threaten the recruitment of youngsters and our fishing heritage. He describes a spot on the Colorado River called the "family pool," a place where parents used to bring their kids and expect them to have a good chance of catching something. "That would have been in the old days when you could kill trout," he writes. "It's rare to see a family in the canyon anymore. Now it's mostly serious grown men dressed from the better catalogs."

Every kid knows that catching a trout—and eating it—is the perfectly natural thing to do.

Gierach extols the value of catch-and-keep fishing, and taking animals by hunting, noting that game and fish are low in fat and cholesterol, have no preservatives, and are there for the taking. "Putting too much distance between yourself and such an obvious reality is not productive," he says.

Other evidence debunks the assumption that keeping fish is wrong, and that strict catch-and-release flyfishing is somehow the "highest form" of fishing. A. Dionys de Leeuw, in a 1996 article in *Environmental Ethics*, makes a firm connection between hunting and fishing but makes this distinction: "While hunters make every effort to reduce pain and suffering in their game animals, anglers purposefully inflict these conditions on fish." He encourages hunters to reject catch-and-release sport fishing. His statements should give pause to those who believe that releasing all fish is somehow a final stage of enlightenment.

Regardless of your feelings about stages, no matter which stage you might be in, most of us can agree that hunting and fishing offer time for reflection. Hunters and anglers are looking for meaning, for connection to nature, and for connection to the past, whether or not they eat the fish or game animals they pursue.

Philosopher Joseph Campbell, in *The Way of Animal Powers*, recognized this. He wrote, "Neither in body nor in mind do we inhabit the world of those hunting races of the Paleolithic era, to whose lives and life ways we nevertheless owe the very forms of our bodies and structures of our minds. Memories of their animal envoys still must sleep, somehow, within us; for they wake a little and stir when we venture into wilderness."

When we take and eat game animals and fish, we relive in a small way this ancient heritage. We taste the wildness and experience perhaps the ultimate stage of the hunter. ■

Stages of the Hunter

from the Montana Hunter Education Manual

DONALD M. JONES

Hunters may pass through stages during their lifetimes, marked by changes in attitudes about hunting. Many of these concepts apply to fishing as well. These are general categories and may not fit for many hunters.

Shooting stage: Beginning hunters are often excited to begin hunting. They have been practicing and want to test their skills by shooting at wildlife. Hunting is seen as a form of recreation.

Limiting-out stage: Hunters in this stage are interested in taking the limit of game animals or fish. They judge success by how many animals they bring home.

Selective stage: Selective hunters are usually after one species, such as a mountain goat or a buck with a large rack. These hunters challenge themselves, and judge their success by their ability to overcome a challenge.

Method stage: These hunters are highly skill-oriented, often hunting with bow and arrow or muzzleloader. These hunters must get close to the animal they pursue, increasing the level of challenge.

Philosopher stage: To these hunters, taking an animal is no longer the main goal. They like to experience nature, pass along knowledge to less experienced hunters, and experience camaraderie with special people in their lives.

DEBOER HONORED BY SHIKAR-SAFARI CLUB INTERNATIONAL

Sheridan Game Warden Jim DeBoer, a 29-year veteran of FWP's Enforcement Division, has been named the 1998 recipient of the prestigious Shikar-Safari Club International Wildlife Officer of the Year award for Montana.

The Shikar-Safari award winners are selected based on their professional relationship with hunters, anglers, and landowners in their districts, their dedication to the wildlife law enforcement profession, and their participation in activities outside of daily enforcement work.

"Jim DeBoer is an exemplary model of what a field game warden should be," said Warden Captain Jim Kropp of Bozeman. "Not many of our employees can maintain the long, faithful, and enthusiastic service he has demonstrated throughout his career. We are fortunate to have such a dedicated wildlife professional working for our state."

DeBoer, based in Sheridan since 1975, was recognized for his outstanding work related to officer safety and critical-incident survival. "Jim is deeply concerned and attentive to the dangers and hazards of the law enforcement profession and is committed to helping other wardens become more prepared," Kropp said. "He's been active in the training and enhancement of the Law Enforcement Division's professionalism and credibility for his entire career."

DeBoer, a certified swift water rescue technician frequently called upon by other wardens to assist in water-related emergencies, offers his expertise to local schools, other agencies, and to fellow employees. He is also a long-term member of FWP's Safety Committee, and was recognized with the agency's "Above and Beyond Safety Award." He and his wife, Becky, annually put on a blacksmith and Dutch-oven cooking demonstration during FWP's Bannack Days at Bannack State Park to provide hundreds of people with a new understanding of Montana's pioneer heritage while helping to integrate the Montana game warden into community activities.

Sheridan Game Warden Jim DeBoer (left) receives the 1998 Wildlife Officer of the Year award from FWP Director Patrick J. Graham.

FWP administrator Beate Galda presents Jeff Scott with the Pogue-Elms Award.

COLUMBUS WARDEN RECEIVES POGUE-ELMS AWARD

Jeff Scott, a Columbus-based FWP game warden, received the Pogue-Elms Award for 1999 from the Western Wildlife Law Enforcement Association at this year's annual meeting in Reno. In presenting the award, association president Beate Galda praised Scott's skills as a crime scene investigator and interrogator; his persistence in solving difficult cases; his efforts to maintain good communications with landowners, sportsmen, and other law enforcement agencies; and his work with new wardens, especially in the fields of firearm instruction and search-and-rescue boat training. Cited as examples of Scott's law enforcement professionalism were a commendation from FBI Director Louis Freeh for the pivotal role he played in locating a Utah fugitive and his wife who had abducted their hospitalized son and fled to Montana, and his assistance to the local sheriff's office that led to the quick arrest of a homicide suspect.

The Western Wildlife Law Enforcement Association is an organization of wildlife law enforcement entities throughout the western United States and Canada. The award is named for two Idaho game wardens who were killed in the line of duty.

FNAWS SUPPORTS BIGHORN HABITAT

The Foundation for North American Wild Sheep (FNAWS), with national headquarters in Cody, Wyoming, fosters wild sheep conservation and habitat protection throughout North America. The Montana chapter, formed

in 1992, conducts an annual fundraiser and sponsors numerous bighorn research and management projects in Montana.

"Each year we gain members, have better attendance at our annual meeting, and most important, earn more money to put sheep on the mountain," says chapter president Jim Weatherly. The eighth annual banquet-fundraiser will be held in Helena on the weekend of February 25-26, 2000.

Weatherly points out that money raised by the Montana chapter has been used for a variety of purposes, including FWP's sheep population inventories, habitat improvement and research projects, and efforts to curtail poaching. Glenn Erickson, who heads the Management Bureau in FWP's Wildlife Division, notes that money raised by the chapter provides a significant boost to Montana's sheep management program. "We're a premier bighorn state," says Erickson, "and it's nice to have the support of a dedicated group of Montana sheep hunters."

DAVE BOOKS

The Foundation for North American Wild Sheep fills a vital role in sheep conservation by funding research and management projects.

To learn more about the Montana chapter of FNAWS and the February meeting, write: Montana Chapter—FNAWS, P.O. Box 3878, Bozeman, MT 59772-3878.—*John "Timmer" Reeves, Board Member, Montana Chapter—FNAWS*

Christmas Bird Count Celebrates 100th Anniversary

Every year since 1900, the National Audubon Society has conducted the original citizen-science project, the Christmas Bird Count. What began as an effort to mobilize the early conservation movement now has evolved into a vast on-line database that sheds light on how human activity has impacted the environment over the entire twentieth century.

More than 50,000 volunteers in all 50 states, every Canadian province, Central and South America, the Caribbean, and several Pacific Islands (areas where North America's breeding birds winter) will count and record every bird species encountered over one calendar day during the December 17, 1999 to January 3, 2000 period. Compilers will enter their group's results at BirdSource, birdsource.org.

"Christmas Bird Count has served many purposes since it was first conceived by ornithologist Frank Chapman in 1900," says Audubon President John Flicker. "It has promoted birdwatching and conservation in unforeseen ways, and in the last year, it has made a century of invaluable data available, free to the general public, through the BirdSource website."

Audubon's count is more than a much-anticipated holiday event; the

JOHN R. FORD

Conducted every year since 1900, the National Audubon Society's Christmas Bird Count provides valuable data on birds like this Clark's nutcracker.

results are vital in assessing the status and health of continental birds as well as the general state of the environment. Like the proverbial canary in a coal mine, birds are among the first groups of animals affected by threats like pollution and habitat destruction.

Decades ago, Christmas Bird Count's volunteer-generated database became a crucial part of the nation's natural history monitoring programs. These data marked the decline in several birds, including the peregrine falcon, trumpeter swan, and bald eagle, which were subsequently listed as endangered. The count also helped government agencies chart the rebound of these species, which have either been removed or proposed for removal from the endangered species list.

The first Christmas Bird Count, held in 1900, was the brainchild of Audubon's Frank Chapman, who assembled 25 other counters to record all the birds they saw on Christmas Day. Now more than 1,700 individual Christmas counts will be held during the two-and-a-half week count period. Each team has a designated circle 15 miles in diameter where they cover as much ground as possible within a 24-hour period. Compilers will then go on-line to the BirdSource website to enter their figures instantly.

For more information on this year's Christmas Bird Count, contact the National Audubon Society at www.audubon.org, or Montana Audubon in Helena at 406-443-3949.

Stevensville Artist Wins Montana Junior Duck Stamp Contest

Jerramy Stroud, age 16, took "best of show" out of nearly 500 entries in the 1999 Montana Junior Duck Stamp Contest. His acrylic painting of a mallard, entitled "The Lilied Mallard," won him $600 in U.S. Savings Bonds, among other awards donated by program sponsors.

As a first-time junior duck stamp participant, Jerramy was more than surprised when news arrived that his painting took first and would be sent on to Washington, D.C., to compete in the national competition. Jerramy's younger brother, Elliott, is a veteran junior duck stamp participant and received third place in this year's competition. Both boys have grown up with wildlife art as a central theme in their Stevensville home.

Jerramy Stroud's "Lilied Mallard"

The junior duck stamp contest is the annual culmination of a program called "Conservation through the Arts," which meshes wetland and waterfowl conservation education with the visual arts. The contest is open to all children from public, private, and home schools, grades K-12. The Montana winner goes on to a national competition, with the winning entry made into a Federal Junior Duck Stamp, available for $5. All proceeds from the sale of Federal Junior Duck Stamps support conservation education.

The deadline for the 2000 Montana Junior Duck Stamp Contest is March 15, 2000. For more information on the Montana Junior Duck Stamp Program, contact: Emily Miwa-Vogan, Montana Junior Duck Stamp Coordinator, Lee Metcalf National Wildlife Refuge, P.O. Box 247, Stevensville, MT 59870; 406-777-5552, ext. 202; Emily_Miwa-Vogan@FWS.gov. Or, visit the Federal Junior Duck Stamp website at www.fws.gov/r9dso/jds/index.html. Regulations and entry forms will be available later this year.

AFTER THE HUNTING IS OVER

by Adam Rahmlow
Game Warden
Region 5 (Roundup)

When the sun sets on the general big game season, many folks assume the work of the game warden is done. While it's true the hunting season is one of the most intense and busy times for wardens, the pace does not slow much when the last shot of the season is fired.

As the general big game season closes, other activities begin. Mountain lion season opens on December 1, and most upland bird seasons continue until mid-December. Waterfowl seasons usually extend to the beginning of January, and late-season hunts, like the famous elk hunt at Gardiner, go into full swing. Wardens are still in the field checking hunters during the day and spending evenings catching up on paperwork and casework generated from hunting activities that began in September. As the landscape slides into the blue depths of winter, wildlife damage problems come to the fore. Wardens are kept busy responding to problems and supplying fencing and other materials to landowners.

Trapping seasons also present Montana game wardens with challenges. Mounted on snow machines, paddling canoes, or trundling in waders, wardens check traplines for adherence to trap-tagging requirements. Montana officers check sites as diverse as the high-country marten traps or bobcat snares along the rimrocks. This is also a time for landowner and trapper contacts—discussing the success of the seasons, identifying problems, or looking into situations that arise. Regulations require that many species of furbearers be reported and tagged within a specific time interval after being taken. Wardens' phones ring throughout December and January with calls from trappers meeting these important requirements.

As winter goes along, wardens inspect licensed fur dealers, compile information on the season's harvest and fur conditions, and check for tagging compliance on bobcats, wolverines, and marten. Making contacts with taxidermists, working with local snowmobiling clubs, checking ice anglers on lakes and reservoirs, and attending rod and gun club meetings all fit into the "off" season warden's schedule. Before you know it, the bald eagles are back in the cottonwoods, a low-luster green is coming onto the hills, and the ice is thawing on the river. And it starts all over again.

Montana's resources and the demands made on them require year-round attention. For Montana wardens, there is rarely a dull moment.

BRYAN GOLJE

During late fall and winter, wardens check for compliance with trapping regulations and gather information on furbearer numbers.

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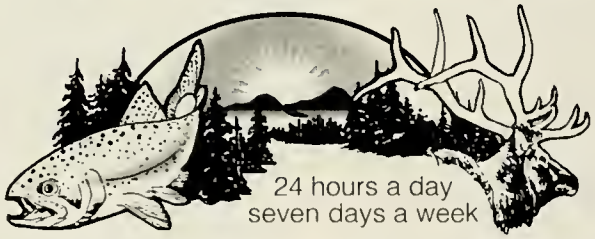

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BOOKSHELF

ECHOES ON RIMROCK: IN PURSUIT OF THE CHUKAR PARTRIDGE, by Buddy Levy, Pruett Publishing Co., 7464 Arapahoe Road, Suite A-9, Boulder, CO 80303 (800-247-8224); 1998, 174 pages, hard cover, $21.95.

"Hunting," says Buddy Levy, "is meaningful not only for its harvests but also for where it takes you, for the landscapes you have been allowed to enter." This is certainly true of chukar hunting in the West, where steep, rocky hills climb skyward from great rivers like the Salmon, Snake, Clearwater, and Columbia. Chukar hunters, he says, are driven not by bag limits but by the challenge of hunting truly wild birds in remote, demanding terrain. In addition to compelling descriptions of the country and philosophical reflections on hunting, the book provides good advice on how and where to find chukars, hunting strategies, dogs, guns, shells, boots, and clothing.

THE LIFE OF A LAB, text by E. Donnall Thomas, Jr. and photography by Denver Bryan, a Ducks Unlimited book distributed by Willow Creek Press, P.O. Box 147, Minocqua, WI 54548 (1-800-850-9453); 1999, 144 pages, hard cover, $29.50.

Labrador retrievers are incredible dogs, as their enormous popularity attests. They excel as family pets, guides for the visually impaired, rescue dogs, drug detection sniffers, and sentry dogs. But they achieve their fullest promise as retrievers of gamebirds, primarily waterfowl. This book, through text and pictures, takes the reader through a Lab's life from puppyhood to old age—not one dog individually, but the breed collectively. Labs have personalities that border on the irresistible, notes author E. Donnall Thomas. "They aren't just hunting machines...they are friends and members of the family."

BIG GAME HUNTER'S GUIDE TO MONTANA, by Ron Spomer, Wilderness Adventures Press, P.O. Box 627, Gallatin Gateway, MT 59730 (1-800-925-3339); 1999, 525 pages, soft cover, $26.95.

A comprehensive guide to big game hunting in Montana, this book contains useful information on seasons, licenses, and hunting regulations for pronghorn, deer, elk, moose, mountain goat, black bear, and mountain lion. It includes a distribution map for each species and area-by-area breakdowns of hunting opportunities across the state. In each big game species profile the author gives biological information as well as tips on hunting tactics, calibers and cartridges, shot placement, and Boone & Crockett scoring. Illustrated with dozens of black-and-white photos, the book also provides information on travel accommodations, guides and outfitters, game processing centers, and taxidermists.

THE WATERFOWLER'S WORLD, text and photography by Bill Buckley, a Ducks Unlimited book distributed by Willow Creek Press (to order, call 1-800-45-DUCKS), P.O. Box 147, Minocqua, WI 54548; 1999, 192 pages, hard cover, $37.50.

An opening quote from the late Gordon MacQuarrie, renowned outdoor writer and waterfowler, sets the stage for this spectacular photo tribute: "The true devotee of the wind-swept autumn waters hunts many other things besides ducks. He hunts the unfolding secrets of the dawn and the message of the wind...." Bozeman photographer Bill Buckley has captured all these things—the beautiful sunrises, marshes and lakes, autumn landscapes, and waterfowl in flight. But he's captured something else, too: the boats and blinds, dogs and guns, calls and decoys, and hunting camp camaraderie—in short, the rituals that make up the waterfowler's world. Buckley's stunning color photos—200 of them—combined with quotes from well-known waterfowlers and his own sometimes funny, sometimes serious text, make this book a joy to read.

SPOTTED BEAR: A ROCKY MOUNTAIN FOLKTALE, by Hanneke Ippisch, illustrated by Hedvig Rappe-Flowers, Mountain Press Publishing Company, P.O. Box 2399, Missoula, MT 59806 (1-800-234-5308); 1998, 48 pages, hard cover, $15.

This beautifully illustrated book—a children's story about how spotted bears get their spots—was inspired by a trip to Spotted Bear Ranger Station near Glacier National Park. The paintings accompanying the text depict more than 50 species of plants, birds, mammals, insects, and reptiles that live in northwestern Montana. Natural history notes at the end of the book, keyed to each painting, will delight and educate young naturalists. The book is directed at children age 6 and above.

RETURN OF ROYALTY: WILD SHEEP OF NORTH AMERICA, by Dale E. Toweill and Valerius Geist, published jointly by the Boone and Crockett Club, 250 Station Drive, Missoula, MT 59801 (1-888-840-HUNT), and the Foundation for North American Wild Sheep; 1999, 214 pages, hard cover, $59.95.

A celebration of the return of wild sheep to many of their historical ranges, this book chronicles transplant and restoration efforts throughout North America. The authors, respected wildlife biologists and wild sheep authorities, have compiled a wealth of information on evolution, behavior, and management of these regal animals. The book includes individual accounts for each state or province harboring Stone's, Dall's, Rocky Mountain bighorn, or desert bighorn sheep, from Alaska and the Yukon south to Sonora, Mexico. Thanks to recovery efforts, wild sheep have increased from an all-time low of 9,000 in 1960 to more than 70,000 today. Lavishly illustrated with color photos and sketches, the book is a must-read for hunters, conservationists, and photographers—in short, anyone who treasures this wild resource.

1999 Montana Outdoors Index

The major items published in *Montana Outdoors* in 1999 are indexed below. Extra copies of '99 issues are available at $3.50 each (includes postage). The following back issues are available at the same price:

1971—all issues, except March/April
1972—all issue, except May/June
1973—all issues
1974—all issues
1975—all issues
1976—all issues
1977—all issues, including Special Yellowstone Issue
1978—all issues, including Special Parks Issue
1979—all issues
1980—all issues, including Special Hunting Issue
1981—1995 all issues
1996—all issues, except January/February and March/April
1997—all issues
1998—all issues

To inquire about or order a back issue, write: Back Issues, *Montana Outdoors*, Montana Fish, Wildlife & Parks, 930 West Custer Avenue, P.O. Box 200701, Helena, MT 59620-0701.

FISH/FISHING/WATER

Saving the Pallid Sturgeon: New Hope for an Old Fish—An innovative stocking program may be our last best chance to save an endangered contemporary of *Tyrannosaurus rex* (Bruce Auchly, March/April).

Taking a Fling at Ling—The burbot won't win any beauty contests, but it's No. 1 in the hearts of a dedicated corps of ice anglers (Steve Dalbey, March/April).

Canyon Ferry: Where Walleye Meet the Rockies—Big changes are in store for anglers at Canyon Ferry Reservoir, a traditional bastion of rainbow trout and yellow perch (Dave Yerk, May/June).

1998 Fish Records—Eastern Montana Leads the Way—Montana anglers set six new fish records in 1998 (Dave Books, May/June).

A Very Fine Trout—Efforts to restore the westslope cutthroat to its native waters are paying dividends (Brad Shepard, July/August).

Days of the Locust—During the hot, breezy days of August, smart anglers know it's hopper time (E. Donnall Thomas, Jr., July/August).

As Good Grayling Should—River-dwelling Arctic grayling are once again wandering the waters of several Montana rivers (Patrick A. Byorth and James P. Magee, November/December).

GAME/HUNTING

Opening Day: Hunting the Heart of Tradition—For most of us, the first day of elk season unleashes a flood of memories (Ben Long, September/October).

Sharing the Sunrise—Taking a youngster afield on Kid's Hunting Day may make him or her a waterfowl hunter for life (Leo Keane, September/October).

Huns Are Where You Find Them—When it comes to hunting Hungarian partridge, learn to expect the unexpected (Dave Carty, September/October).

Perspectives—Furry Collections of Quirks—Hunters dream about the perfect canine companion, but most bird dogs have memorable foibles (Mark Henckel, September/October).

The Warden's Corner—Decoys Promote Safe Hunting and Fair Chase—The use of simulated wildlife helps wardens catch spotlighters and other game law violaters (Chad Murphy, September/October).

Home Range—Wilderness hunting trips are nice, but a trophy whitetail may be waiting just down the road (Ben Long, November/December).

Operation Breaks—An undercover investigation breaks up a north-central Montana poaching ring (Bruce Auchly, November/December).

Public Hunting Access: An Elusive Quarry—Access to private land lies at the heart of Montana's hunting tradition (Alan Charles, November/December).

GENERAL

Special Photo Issue (January/February).

1998 Annual Report—A summary of FWP goals and priorities, project highlights and a budget breakdown (March/April).

Catchall—Mikal Kellner Wins "The Vinnie"—A Helenan wins the 1998 Vincent Yannone Ambassador for Wildlife Award (Paula Clawson, March/April).

Promise—The proposed Thompson-Fisher land agreement would maintain public access to 170,000 acres of Plum Creek Timber Company land (John Fraley, May/June).

Catchall—"Crown of the Continent" Poster Available—A poster/map depicting the area straddling the Continental Divide in northern Montana and southern Canada is available free of charge to educators (Lisa Flowers, May/June).

The Warden's Corner—Sharing "The Last Best Place" with Wildlife—As Montana's population continues to rise, conflicts with wildlife will increase (Jeff Darrah and Dan Curtin, May/June).

Catchall—Weed Control: It's Time

for a Statewide Strategy—The Governor's Weed Summit was a first step toward developing a common plan to fight invasive plant and animal species (Mike Thompson, July/August).

The Warden's Corner—The Wardens of Fergus County—There have been one county and 13 state game wardens in Lewistown over the past 100 years (Jim Conner, July/August).

Perspectives—Stages—Hunters' and anglers' attitudes may change as they get older, but love of nature forms a common thread (John Fraley, November/December).

Catchall—DeBoer Honored by Shikar-Safari Club International—A Sheridan game warden garners the prestigious Officer of the Year Award (November/December).

Our Point of View—Education and regulation are both vital in ensuring that wildlife lawbreakers don't ruin hunting and fishing for the rest of us (Patrick J. Graham, November/December).

The Warden's Corner—After the Hunting Is Over—A game warden's pace doesn't slow much with the close of the general big game season (Adam Rahmlow, November/December).

PARKS/DEPARTMENT LANDS

Passing on a Wild Inheritance—The fiftieth anniversary of the Blackfoot-Clearwater Wildlife Management Area presents a challenge and an opportunity (Mike Thompson, May/June).

The Next Journey—A new visitor center at Ulm Pishkun State Park provides a bridge spanning two cultures (Bruce Auchly, May/June).

Our Point of View—Preserving our history at Ulm Pishkun and conserving a big game winter range at Blackfoot-Clearwater maintain bridges over common land (Patrick J. Graham, May/June).

Welcome Home Montana—Montana's 41 state parks beckon visitors from around the world (Marcella Sherfy, July/August).

State Parks: A Home for Plants and Animals—Winners of the State Parks Poster Contest for fifth-grade students are announced (July/August).

From the Field—North Shore Easement Adds to Giant Springs—A conservation easement between FWP and the Montana Power Company will preserve 2,700 acres of Missouri River shoreline in a natural state (Bruce Auchly, July/August).

Lands Legacy—Mule Deer Mecca—The Harris Conservation Easement will protect 10,000 acres of wildlife habitat in the Highwood Mountains (Jim Williams and Bruce Auchly, September/October).

Our Point of View—Conservation easements—working partnerships where landowners get paid to preserve land and wildlife values—are helping maintain the Montana way of life (Patrick J. Graham, September/October).

Catchall—New Blackfoot-Clearwater Poster Available—Proceeds from the sale of a poster help purchase a critical inholding in the Blackfoot-Clearwater Wildlife Management Area (September/October).

From the Field—A Partnership that Works!—After five years, FWP's Page-Whitham Conservation Easement in eastern Montana has been a resounding success (Pat Gunderson, September/October).

WILDLIFE

An Owl for All Times—The short-eared owl is an efficient night predator, but also hunts during the day (Jerry Kustich, March/April).

Colors of Survival—Protective coloration in animals, birds, reptiles, and insects takes on a number of fascinating forms (Sam Curtis, March/April).

Rossberg Wins 1999 Migratory Bird Stamp Contest—Great Falls artist Cliff Rossberg's painting of two Barrow's goldeneyes took first place in this year's stamp competition (William Phippen, March/April).

From the Field—A New Species of Bat for Montana—An eastern red bat found near Ismay is the first of its kind sighted in more than 100 years (Tom Lemke, March/April).

The Warden's Corner—Two Cubs for the Price of One—A game warden helps capture two orphaned black bear cubs that need FWP's assistance (Steve Andersen, March/April).

Dabblers and Divers—Some of Montana's ducks "dabble" in shallow water for food and some dive to considerable depths (photography by W. Steve Sherman, May/June).

A Prairie Dog Companion—Because burrowing owls nest in prairie dog holes, the fates of the two species are inextricably linked (Marco Restani, Larry Rau, and Dennis Flath, July/August).

Our Point of View—When a species doing well in Montana is listed under the Endangered Species Act, FWP's conservation efforts may be compromised (Patrick J. Graham, July/August).

Born Killers—Lightning-quick and fearless, the weasel may be Montana's most formidable carnivore (John Fraley, September/October).

From the Field—Surveying Rare Wildlife in the Bitterroots—Remote cameras provide biologists with information on rare carnivores and their prey (Dr. Kerry R. Foresman, November/December).

SURVEYING RARE WILDLIFE IN THE BITTERROOTS

by Dr. Kerry R. Foresman
Professor of Biology
University of Montana

Do marten, fisher, wolverine, and lynx live in the Bitterroot Mountains of west-central Montana? Rugged and beautiful, dissected by numerous mountain streams, the Bitterroots would appear to provide ideal habitat for these mid-sized carnivores. Yet, as is often the case, these secretive animals are rarely observed.

In 1995 the U.S. Forest Service, frustrated by lack of information on these species throughout the Northwest, proposed that survey guidelines be developed. As resident mammalogist at the University of Montana, I was asked to help develop and test protocols for such a survey effort. The idea seemed simple enough—develop a remote, nonintrusive, inexpensive method for detecting these mammals that could be implemented consistently by biologists in state and federal agencies across the Northwest. With a standarized approach, data could easily be compared and regional information accumulated.

The methods proposed for testing were remote cameras, sooted track plates, and snow tracking. Over the course of the study, research technicians Dean Pearson and Mike Maples, graduate student Jake Ivan, and I fine-tuned the methods and protocols. We concluded that two of the three methods—remote cameras and track plates—worked best under conditions in the Bitterroots. Snow tracking, though useful in certain areas, is unreliable because of inconsistent snow conditions. At lower elevations it is often raining; at mid-elevations it may be sleeting; up higher, the sleet often changes to heavy snow. Tracks quickly melt out and disappear under rain and sleet, and rapidly fill in with snow at higher elevations.

Our camera stations consisted of a 35-mm camera coupled to two sensors: a microwave detector that responds to motion and an infrared detector that responds to heat. Thus, any warm-bodied object moving in front of the camera triggers the shutter. To specifically attract forest carnivores, we baited the stations with road-killed deer (obtained with FWP permission) and used commercial lures to make the stations as smelly as possible.

KERRY R. FORESMAN

The marten is a common but seldom-seen inhabitant of west-central Montana's Bitterroot Mountains.

Camera stations were checked once a week for four weeks to replace batteries, film, and bait where needed. In all, our 29 camera sets worked effectively for 895 days, allowing us to take over 4,000 color photographs. Nineteen species of mammals were photographed, ranging from deer mice to moose. We routinely documented marten and fisher, two of our target species, and on two occasions got pictures of wolverines. Lynx were not detected, but this is not surprising since all our stations were in habitat and at elevations inconsistent with lynx activity.

The remote cameras proved useful not only in detecting rarer species but also the prey on which forest carnivores rely, like red-backed voles, red-tailed chipmunks, red squirrels, flying squirrels, bushy-tailed woodrats, western jumping mice, and snowshoe hares. Other nontarget species photographed included short-tailed weasels, red foxes, coyotes, bobcats, mountain lions, black bears, and white-tailed deer. Since many of our cameras were set along established trails, we also often caught images of cross-country skiers (and their canine companions) who stopped to observe the bait sets.

Because the cameras were programmed to record date and time on each photo, we obtained valuable information on activity patterns. For example, we found that marten are active during both day and night. This allows them to prey both on snowshoe hares, which we found to be strictly nocturnal during winter months, and red squirrels, which we observed to be diurnal.

The track plates also provided a wealth of data. These sets were of two types, "open" and "closed." Open plates consisted of a sheet of galvanized steel as a floor to which a fine

Left: *Attracted by a chicken wing, a marten approached this blackened track plate and triggered the remote camera.* **Below:** *These fisher tracks were left on contact paper at an open track plate. The smaller tracks around the edge were made by deer mice.*

KERRY R. FORESMAN

layer of soot was applied. A small piece of bait (commonly a chicken wing) was placed in the center. When animals crossed the blackened plate to reach the bait, they left tracks behind—actually a negative image of the surface of their foot as they removed the carbon coating.

"Closed" plates were not actually closed but had a quonset-shaped cover placed over the sooted floor plate for protection against rain and snow. A piece of white contact paper was taped near the back of the floor with its sticky side up. As animals walked across the plate to grab the bait, they first stepped on the sooted metal and then on the sticky paper, leaving a permanent, often exquisite, image of their track for us to identify.

The tracks of many species, such as deer mice, bushy-tailed woodrats, and short-tailed weasels, are distinctive and readily identified. Others require detailed measurements before positive identification can be made. In early fall, for example, adult male marten tracks overlap juvenile female fisher tracks in size. Distinguishing these species at this time of year requires several measurements of track length and width. The measurements are then entered into a mathematical formula that distinguishes between the foot shapes of these species. Track plates are so easy, fun, and inexpensive to use that I have helped teachers throughout Montana incorporate this method into their field biology classes.

Recently we have attempted to strengthen the validity of the track plate method by determining the "probability of detection" when a species is known to exist in the area. In other words, to provide an accurate estimate of a species' presence with this method (as well as with remote cameras), we need to know how likely it is that the method will detect a species in question. If a species is not detected, one cannot conclude that it is absent from the area, only that the method failed to detect it.

Ultimately we would like to be assured that proper application of our methods will provide a high probability of detection when target species are present. We have approached this question by first putting radio-collars on marten and then placing a radio receiver coupled with a time-event data logger next to the track plate. By adjusting the sensitivity of the receiver so that a collared animal is only detected within five meters of the plate, we can determine how often an animal approaches the plate. Comparing this information with how many times the animal actually stepped on the plate will allow us to modify our techniques to increase their effectiveness.

So far we have learned that most marten approach baited, closed track plates many times over many days before actually entering and stealing the bait. It appears these carnivores are very suspicious of anything new in their environment—a behavior that no doubt increases their ability to survive in the wild.

Overall, we have found our methods to be highly useful in providing information on these rare carnivores, their prey, and the activity patterns of both. The methods are now being widely used throughout Montana, Idaho, Washington, Oregon, and California. They can also be easily modified to detect other species, as we have done by using peanut butter and rolled oats as bait for noncarnivorous small mammals. Coupled with an understanding of habitat needs, this approach should help in development of sound forest management plans for our rarer species.

Remember, the next time you go hiking in the Bitterroot Mountains, keep your eyes open. But don't be too disappointed if these species remain as elusive as ever.

WHERE HAVE THE WEASELS GONE?

I read John Fraley's article on weasels (September/October) with interest. Not that I know a lot about them, but as a rancher I have seen them around all my life—or at least their tracks in the winter after every snowfall.

My question is this—do you feel they are as common now as they always have been? You no doubt have a better idea on this than myself and I suppose you also have figures on number of skins sold to fur companies.

I don't have this wider knowledge of things statewide, but I can tell you this: in lower Flint Creek Valley on my ranch I haven't seen a weasel track in 8 or 10 years, and before that they were very common along all ditches and around stacks of hay where they hunted mice. Also in the last 8 years jackrabbits have completely disappeared in the lower valley. I saw *one* track all last winter in our pasture where before this there were highways of packed trails. They are so scarce that I would lay you a $100 bet that 50—no, 100 men—with .220 Swift rifles could hunt a day *and not find one*. They tell me in upper Flint Creek Valley near Philipsburg there are still rabbits.

I no longer see horned larks and we once had big flocks, but of course birds can easily move. I don't believe it's a coincidence that these animals started disappearing exactly at the same time the lower valley was sprayed with picloram to kill knapweed. Oh yes—it also wiped out Columbian ground squirrels where it was used. We used it on our ranch too, sorry to say.—*Bill Ohrmann, Drummond*

A PITIFUL SIGHT

I am a subscriber to your magazine and also a hunter in the state of Montana. My sons and I have hunted deer and antelope over the years. During our last hunting trip to the 700 district I saw something that prompted this letter.

We witnessed hunters (not ranchers) chasing a herd of antelope on 4-wheelers. They wore blaze orange and carried rifles, their intent was quite obvious. My question is, does the state of Montana allow this? It was a pitiful sight to say the least. Montana is our favorite place to hunt and visit. We're looking forward to next year already.—*LeWayne Krause, Andover, Minnesota*

The Montana Hunting Regulations state that "hunters may not use a motorized vehicle or aircraft to concentrate, drive, rally, stir-up, corral, or harass wildlife except predators." What you observed was an illegal act. Should you observe a wildlife violation in the future, please contact a game warden or call FWP's toll-free hotline: 1-800-TIP-MONT (1-800-847-6668). You can remain anonymous and you may be eligible for a cash reward.—Editor

KEEP FARM AND RANCHLAND UNDEVELOPED

As a gift I received a subscription to what I can see is a great magazine. I was pleased to read your magazine is devoted to non-development of farm and ranchland by money-hungry developers— those that build and run on to the next victim. Thank God somebody stands in their way.

This country could use some more Montana people.

Those wide-open fields sure do call to me, but being a retired man I suspect those cold winters would have an effect on me. I'm used to mild weather now.

But thank you for making your publication one that I look forward to. I guess I should thank my son again. He's a Bozeman resident.—*William Tischler, Santa Rosa, California*

ENJOYED "OPENING DAY"

I really enjoyed the article "Opening Day" by Ben Long (September/October), especially the last two paragraphs. I often think about opening day of hunting season in Montana, while I'm living in Washington. I haven't really appreciated much in life until now. One of the things I have appreciated was hunting in Montana. These days all I can do is think about opening day while I am fighting leukemia. So when this fight is all done and I am finished with school, I can again enjoy opening day and hunting in Montana.—*Terry Baker, Toledo, Washington*

YELLOWSTONE OR WESTSLOPE?

The fish on the cover of the July/August 1999 issue looks to me more like a Yellowstone cutthroat than a westslope cutthroat. The gill covers on westslope cutthroat do not get that much color even at spawning time.

I enjoy your magazine very much. I also enjoy my two annual visits to your state each year.—*S. Don Cahoon, via e-mail*

The two subspecies can be difficult to differentiate. Most experts cite the Yellowstone's yellow-brown background color and fewer but larger black spots that extend to the lower side. The westslope is usually silvery steel gray with olive tints on the back. But genetic analysis is required for positive identification.—Editor

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With contrasting collar, cuffs, and placket, this 100% combed cotton pique golf shirt is available in *forest green/wine/navy; wine/forest/navy (shown);* and *jade/concord/royal.* Comes with embroidered Montana Outdoors logo; available in sizes M, L, XL.
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Contributors

Long

If you live in northwestern Montana—or for that matter, almost anywhere in Montana near a river bottom—you probably live close to white-tailed deer. "Whitetails," says **Ben Long**, are the animals we dodge on the drive to work and the creatures that devour our gardens. Hunting them need not be the least bit expeditionary." In "Home Range" (p. 2), his reflections on pursuing these escape artists in familiar territory, he rightly points out there is a lot to be said for an animal that can be hunted for a few hours after work or before a high school football game. Long is a Kalispell-based freelancer who admits the local whitetails have taught him humility.

According to **Patrick Byorth** and **James Magee**, Arctic grayling have swum the headwaters of the Missouri River for more than 10,000 years, "As Good Grayling Should" (p. 7). But dam construction, introduction of non-native trout, and habitat changes doomed them to near-extinction by 1980. Now, however, thanks to an Arctic Grayling Recovery Program that began in 1987, these elegant fish are once again wandering the waters of several Montana rivers. Stream-dwelling grayling raised in hatcheries have been reintroduced to the Ruby River and the north and south forks of the Sun, and releases are scheduled for other rivers in the next few years. Byorth and Magee are FWP fisheries biologists stationed in Bozeman and Dillon, respectively.

Poaching rings are difficult for uniformed field wardens to crack, especially in rural Montana where local wardens are hardly inconspicuous. That's why FWP established a Criminal Investigation Section in the 1980s, which, among other things, uses undercover officers to investigate illegal outfitting and commercialization of wildlife. For **Bruce Auchly's** detailed account of an undercover operation that began in north-central Montana in 1994 and recently concluded with the arrest and conviction of 16 residents and nonresidents, turn to "Operation Breaks" beginning on page 12. Auchly is an information officer at FWP's Region 4 office in Great Falls.

Charles

Public hunting access is at the heart of North America's hunting tradition, but it has been under increasing pressure in recent years. To maintain our hunting legacy, **Alan Charles** believes we need to find ways of encouraging landowners to provide wildlife habitat and tolerate the impacts associated with wildlife, yet allow some acceptable level of public access. In "Public Hunting Access: An Elusive Quarry" (p. 16), he looks at attitudes of both hunters and landowners and describes some of the efforts underway to come up with workable solutions. Charles is FWP's landowner/sportsman coordinator in Helena.

Some experts on human behavior suggest that hunters and anglers pass through stages as they mature, with the taking of fish and game becoming less important with time. One scenario refers to the final stage as the "philosopher" stage, where experiencing nature and passing along knowledge to less experienced hunters becomes the dominant theme. But **John Fraley** notes that more and more hunters and anglers are going beyond this stage and "directly connecting to nature for a small portion of their sustenance." Releasing all your fish may seem like a tidy idea, says Fraley, but all too often it becomes a form of snobbery that disconnects us from reality. For a thought-provoking analysis of "Stages," turn to this issue's "Perspectives" installment on page 21. Fraley is an information officer based at FWP's regional headquarters in Kalispell.

Foresman

Do marten, fisher, wolverine, and lynx live in the Bitterroot Mountains of western Montana? To answer this question and help the U.S. Forest Service develop a standardized approach to surveying these rare carnivores, **Dr. Kerry Foresman** and his assistants at the University of Montana developed two inexpensive techniques that can be applied in mountainous areas throughout the Northwest: remote cameras and baited "track plates." To learn more about these innovative methods, see "From the Field" on page 32. Foresman is a wildlife biology professor at the University of Montana in Missoula.

MO thanks the following photographers for their contributions to this issue: **Mike Babcock/Great Falls Tribune**, Great Falls; **Denver Bryan**, **Dusan Smetana**, and **Dale C. Spartas**, Bozeman; **John R. Ford**, Land O' Lakes, WI; **Kerry R. Foresman**, Missoula; **Randy Gazda**, U.S. Fish & Wildlife Service; **Jeff & Alexa Henry**, Emigrant; **Jim Huestess**, Puyallup, WA; **Donald M. Jones**, Troy; **Mike Logan**, Helena; **Jim Petek**, Red Lodge; and **George Wuerthner**, Livingston. Thanks also to the following employees who work for the department: **Rich Furber**, Glasgow, and **Bryan Golie**, Billings.

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